

ICT Mumbai Campus

INSTITUTE OF CHEMICAL TECHNOLOGY

ICT- Marathwada
Jalna (MARJ) Campus

ICT- IOC Bhubaneswar
(IOCB) Campus

HANDBOOK | 2023-2024



INSTITUTE OF CHEMICAL TECHNOLOGY

Mumbai | IOC Bhubaneswar | Marathwada Jalna

Category I Deemed to be University (MHRD/UGC)
Elite Status and Centre of Excellence, Govt. of Maharashtra
"National Rank 6 in Atal Innovation Ranking (ARIIA) 2021" by MHRD



<http://ictmumbai.edu.in>

VISION

- We shall perennially strive to be a vibrant institute with continuously evolving curricula to brighten the future of the chemical, biological, materials and energy industries of the nation, and rank amongst the very best in the world through active participation and scholarship of our faculty, students and alumni.
- We shall be creators of sprouting knowledge and design cutting-edge technologies that will have the greatest impact on society and benefit mankind at large.

MISSION

- We shall generate and sustain an atmosphere conducive to germinating new knowledge at every available opportunity.
- The education we shall impart will enable our students to devise new solutions to meet the needs of all segments of society with regard to material and energy, while protecting the environment and conserving the natural resources.
- Our endeavors, while extending well beyond the confines of the classroom, will aim to enhance public welfare and our attempts to disseminate knowledge will spread to a greater multi- and cross-disciplinary platform to conduct research, discovery, technology development, service to industry and entrepreneurship, in consonance with India's aspirations to be a welfare state. We will team scientists and engineers with professionals in other disciplines to arrive at better solutions.
- We will provide all our students with a strong foundation to encourage them to be our ambassadors in the professional activities that they choose to undertake in service of society at national and international levels.
- Through our vision, we will serve the profession and society and strive to reach the summit as a team, and ultimately serve as role models to the younger generation.

PLEDGE

I AM ICTian. This is my institute, I take deep pride, but without vainglory; to it I owe solemn obligations that I am eager to fulfil. I Climb These steps into a grand shrine of knowledge and portal of excellence. I am privileged to be a part of a great tradition, rich culture and ethos built by selfless services of great many individuals. I take great pride in its achievements and eminence. I will be in a company of knowledge seekers, givers and servers. It will be my endeavor to protect its reputation and legacy. I will participate in none but honest enterprise. I shall shun prejudice of all kinds and perform actions that are deemed righteous morally, ethically, professionally and legally. To my fellow I pledge, in the same full measure I ask of them, integrity and fair dealing, tolerance and respect, and devotion to the repute and dignity of our institute; with the consciousness, always, that our special expertness carried with the obligation

TO SERVE ICT, INDIA AND MANKIND WITH COMPLETE SINCERITY.

HANDBOOK: 2023-2024



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Mumbai | IOC Bhubaneswar | Marathwada Jalna
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International Standing

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TECHNOLOGICAL ASSOCIATION

Technological Association or TA as it is well known among the students is one of the oldest student run body for the welfare of Institute of Chemical Technology, dating its inception in 1934.

There are 8 Clubs, 1 Intra-College Festival and 3 Inter-College Festivals in the Technological Association.

Since Years TA's motto has always been Student Welfare through activities ensuring overall personality development. TA ensures that every student at the institute learns in a healthy environment giving them opportunity to showcase their talents.

The 8 Clubs of the TA are Art Club, Music Club, Manthan Club, Literary Club, Entrepreneurship Cell, Bombay Technologist, Sports Club, TEDx ICTMumbai.

The Intra-College Festival is called the FUNTECH. The 3 Inter-College Festivals are Vortex - The Chemfest (Technical Festival), Manzar (Cultural Festival), Sportsaga (Sports Festival).

The tentative dates for the Inter-College festivals are as follows:
 Manzar 2019: Jan 31 to Feb 03 2019
 Sportsaga 2019: Mar 7 to Mar 17 2019
 Vortex 2019: Oct 17 to Oct 20 2019

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INSTITUTE OF CHEMICAL TECHNOLOGY
Mumbai





1.1 IMPORTANT INSTRUCTIONS

The fees for the submission of a single form for a particular programmes at ICT are as follows

Programmes	Open Category	Reserved Category **
Postgraduate	Rs. 1000/-***	Rs. 500/-***

- ** Fees for Reserved Category candidates are applicable to the candidates from the State of Maharashtra only.
- *** The payment for the same should also be made online (Extra charges may apply for online transaction)
- 3. The admission form for the academic year 2023-24 should be filled online on the ICT website, <http://ictmumbai.edu.in> The Academic Bank of Credits (ABC) ID is mandatory for submission of Application from AY 2023-24 for all programmes. Please visit <https://www.abc.gov.in/> for creating ABC ID, if you do not have one already.
- 4. Anybody, not belonging to the Reserved Category, found buying application form under that category will be disqualified.
- 5. Please read the Handbook carefully before filling the admission form.
- 6. Due to circumstances beyond control of authorities, the schedule of admission may change and it will be notified on the website. Candidates are advised to watch the website regularly.
- 7. All the information related to PG Admissions 2023-24 will be displayed on <http://ictmumbai.edu.in> and the ICT Notice Board. **Please note that no individual correspondence will be made in this regard and it is the responsibility of the candidates to visit the webpage regularly.** PG candidate must visit ICT website time to time to check the Admission schedule.
- 8. **Pleading ignorance about information displayed on the web shall not be entertained.**
- 9. Admission to hostel on the Main Campus in Mumbai is as per the rules laid down and the quota for various courses. **Admission to ICT, in no way, guarantees admission to Hostel. The Hostel allotment will depend on the availability.**
- 10. Merit is the only criterion for admission to any course and seats are reserved as per Government of Maharashtra's directives in this connection for campuses in Mumbai and Jalna. The IOCB campus will follow the all-India criterion.
- 11. Biometric attendance system is adopted for all classrooms and lectures are recorded. An auto generated message is sent to the student and his/her registered parent/guardian at 9.00 pm if the student has missed any lecture. Thus, a record is available to ICT authorities on real-time basis.
- 12. **There are no agencies operating on behalf of the institute and there is no capitation fee or donation in regard of admissions.** Be careful of any persons claiming to offer admission to the ICT or knowing authorities. No extraneous considerations should be brought to exert pressure on the Admission Committee. It will be strictly dealt with. We take pride in fairness and openness in admissions and all matters and give justice to one and all.
- 13. All correspondence regarding admissions should be addressed to the Registrar, Institute of Chemical Technology, Nathalal Parekh Marg, Matunga, Mumbai-400019 (admission@ictmumbai.edu.in; +91-22-33611111/ 2222; Fax: +91-22-33611020).



1.2 APPROACH ROUTES TO ICT AND LANDMARKS

A location map of the ICT, available on Google maps, is provided above and various access routes are described from nearby railway stations, bus stops and the airport.

Landmarks in the vicinity of ICT

VJTI (Veer mata Jijabai Technological Institute) (Backside), Khalsa College, Don Bosco School and Church are well-known landmarks adjacent to the ICT on the Nathalal Parekh Marg. The Main Security Hub of ICT prominently depicts its name both in English and Devanagari scripts and cannot be missed. The main building is constructed of a yellowish Malad stone, surrounded by excellent greenery and beautiful gardens. The ICT campus is a picturesque and quiet place. It is located on a 16-acre plot, surrounded by Nathalal Parekh Marg (front side), Purnamal Singhani Marg (between Don Bosco and ICT), R.A. Kidwai Marg (backside) and P. B. Sule Marg.

Most of the long-distance trains on the Central and Western Railways halt at Dadar Railway Station (see routes D and E below). All buses operated by the Maharashtra State Road Transport Corporation and private carriers stop at Dadar bus station on Dr. Babasaheb Ambedkar Road near Jagannath Shankarshet Flyover and Khodadad Circle (or popularly called Dadar TT).

A. From Matunga Railway Station (Central Railway-Main Line)

ICT can be reached in about 15 minutes on foot following L. Nappu Road, Bhandarkar Road, Maheshwari Udyan (King's circle), Don Bosco Church/ High School/ Khalsa College.

B. From Wadala Railway Station (Harbour Line of Central Railway)

It is about 12 minutes walk. Exit on the western gate on the Rafi Ahmed Kidwai Road; walk straight on D.S.Barato Road in front of the station to Wadala Church and turn right on Nathalal Parekh Road (backside of VJTI). It will take about 5 minutes to reach the ICT.

C. From King's Circle Railway Station (Harbour Line of Central Railway)

Get down on Dr. Babasaheb Ambedkar Road and walk southward towards Arora Cinema and then along Nathalal Parekh Road towards Don Bosco Church/ High School and ICT. It is about 10 minutes walk.

D. From Dadar Railway Station (Central Railway)

Walk towards Dr. Babasaheb Ambedkar Road via Pritam Hotel. Take BEST Bus No.64 to Maheshwari Udyan (King's circle) and get down at the ICT / Don Bosco Church/ High School bus stop exactly opposite to ICT's main gate.

E. From Dadar Railway Station (Western Railway)

Exit on the western gate to Senapati Bapat Marg and walk on Ranade road and N.C. Kelkar Road to Plaza Cinema. Board on Bus No. 169 towards Pratiksha Nagar and alight at the ICT / Don Bosco Church/ High School bus stop exactly opposite to ICT's main gate. You can also get on to Bus No. 63 to Chunabhatti and get down at the Bus stop called Gate No 4. Walk along the R.A. Kidwai Marg and enter through the rear gate for the ICT hostels.

F. From Chhatrapati Shivaji Maharaj Terminus (CST): Main Central Railway Station

Board a Harbour train to Wadala station and follow route B. Else board a Main line train to Matunga Central Station and follow route A.

G. From Kurla Lokmanya Tilak Terminus Railway Station

Board a Harbour train to Wadala station and follow route B. Else board the Main line train to Matunga Central Station and follow route A.

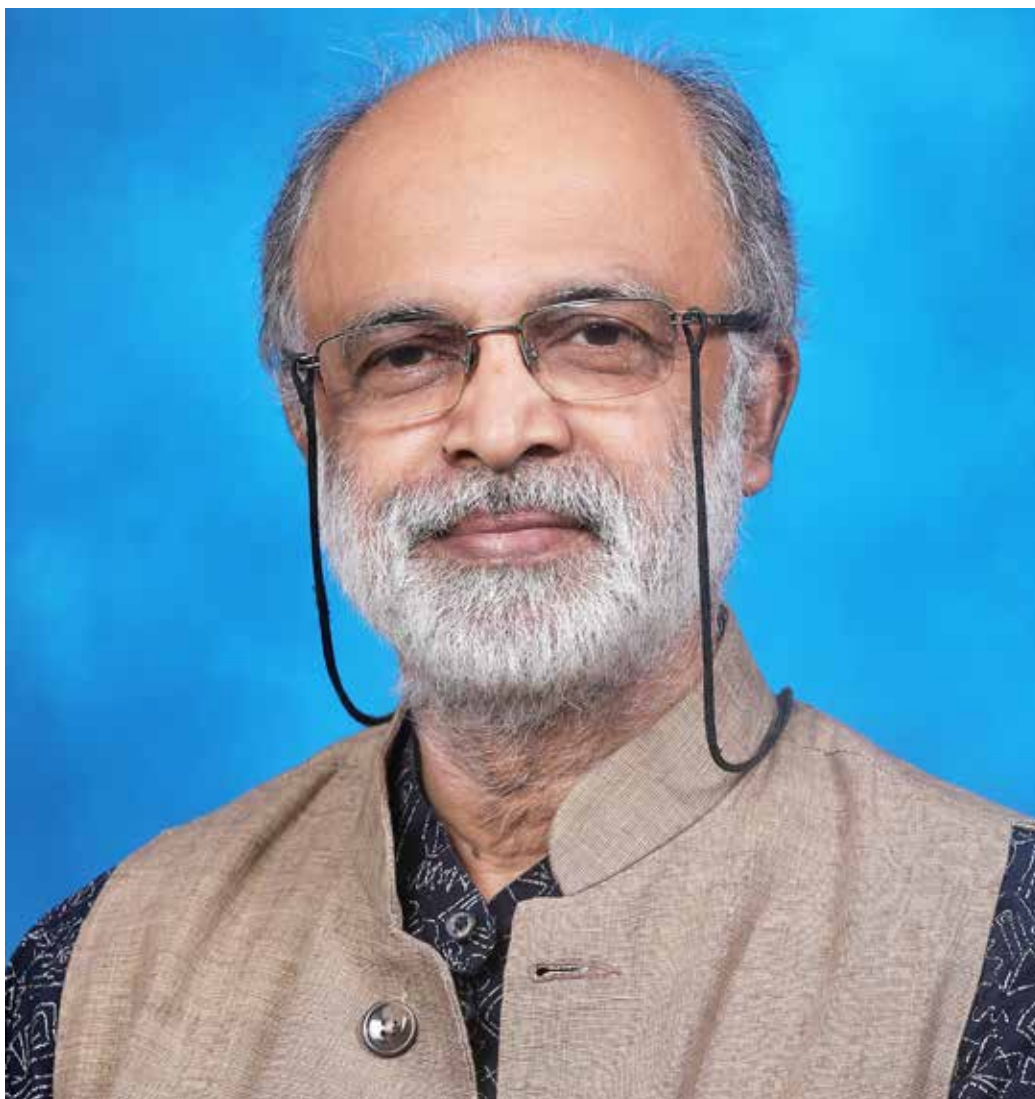
H. From Chhatrapati Shivaji International Airport Sahar and Domestic Terminal, Santacruz (East)

Rent either a pre-paid taxi Uber or Ola or hire a taxi for Maheshwari Udyan (King's Circle), Don Bosco Church/ High School and ICT. The maximum fare for a regular taxi should be around Rs. 400, without any traffic jams. It takes about 30-40 minutes.





INSTITUTE AUTHORITIES AND PROFILES OF DEPARTMENTS



Prof. Aniruddha Bhalchandra Pandit

B.Tech., Ph.D.(Tech.)

F.T.W.A.S., F.N.A., F.A.Sc., F.N.A.Sc., F.N.A.E., F.M.A.Sc.,

Vice-Chancellor

Jagdish Chandra Bose National Fellow (DST-GOI)

U.G.C. Research Scientist 'C'

PREAMBLE

The Institute of Chemical Technology (ICT), Mumbai is a unique Institute which was established on 1st October 1933 as a University Department of the Bombay University (UDCT), completing 89 years of glorious past. ICT has created its own brand over the years which has been recognized by several prestigious awards and accolades to the faculty, students and alumni individually and also as an institute. Under the World Bank's Technical Education Quality Improvement Program (TEQIP), ICT was granted full autonomous status in 2004 and declared as Deemed-to-be University on September 12, 2008 by the MHRD under Section 3 of the UGC Act of 1956. It was bestowed an Elite Status and Centre of Excellence on par with IITs, IISc and IISERs in the State Assembly on April 20, 2012 by the Government of Maharashtra based on its stellar performance, on par with the institutes of national importance. The genesis of ICT Mumbai is truly educative and its achievements are inspirational. It has now three campuses: main (Mumbai), and two off-

campuses, Bhubaneswar, Odisha and Marathwada, Jalna. The later were opened during 2018-19 with innovative Integrated Master's degree and research programmes. We are just about coming out of a huge Global crisis due to the pandemic and as a leading Technological and Engineering Institute, ICT has to play an exemplary and a leading role as it has done in the past in the time of every national and Industrial demand. This time the situation is different though, as in addition to the technological contribution, we have to address the clarion call of Atmanirbhar Bharat, as a priority.

ICT, Mumbai is housed on 16 acres of land in Mumbai and is running 9 UG (Chemical Engineering; 7 branches of Chemical Technology; 1 Pharmacy), 18 PG (9 inter-disciplinary) and 29 Ph D programmes (11 interdisciplinary), 1 PG Diploma in Chemical Technology Management for doctoral students and 1 PG Certificate Course in Chemical Safety and Risk Management for all UG and PG students. ICT is governed according to special Statutes which go beyond Deemed University concept as approved by the Government of Maharashtra. In a historic decision on February 12, 2018, the University Grants Commission declared Category I Deemed to be University status to ICT which has maintained high academic standards (NAAC grade of A++ CGPA 3.77 out of 4). The Minister of Human Resource Development, The Central Government is striving hard to introduce a liberalized and social relevant academic regime in the education sector with emphasis on linking autonomy with quality and societal relevance. The recently declared National Education Policy (NEP 2020) coupled with Science, Technology and Innovation Policy (STIP) has charted out a clear path of implementation of both the programs with emphasis on and innovation and in the Education of Chemical Sciences. ICT has to play a leading role by setting the trend as a torch bearer. Coming out of this unprecedented COVID 19 crisis, this academic freedom needs to be used for the betterment of the society and associated education using innovative ALL ENCOMPASSING teaching and knowledge dissemination methods, along with the creation of socially relevant knowledge having wider acceptance and ease of implementation.

TWO OFF-CAMPUSES

March 18, 2018 marked a unique milestone in the chequered history of ICT which crossed for the first time the confines the State of Maharashtra and entered the beautiful and benevolent State of Odisha. ICT is indeed fortunate that the launching of the Institute of Chemical Technology, Mumbai Indian Oil Odisha Campus (ICT Mumbai-IOC), Bhubaneswar was done at the auspicious hands of Hon'ble Shri Ram Nath Kovind, THEN the President of India in the august presence of Hon'ble Shri S.C. Jamir, Governor of Odisha; Hon'ble Shri Dharmendra Pradhan, then Union Minister for Petroleum and Natural Gas, Skill Development and Entrepreneurship, now THE Minister of Education and a galaxy of bureaucrats, distinguished academics and citizens, stalwarts from industry and well-wishers from across the country. This new campus currently being operated using IIT-Kharagpur extension campus has already bagged Best Educational Institute Awards for the past two years.

Now, the Government of Odisha has sanctioned a land over 73 acres for the ICT-Mumbai Odisha campus which has now been taken in possession with the marking of the boundary. All modern research facilities are created over there through the support of IOC and this activity IS pursued and followed by top echelons of IOCL and the Honourable Minister Shree Pradhan personally. The construction activity for the new campus has been entrusted to NBCC, with a promise of its completion by 2024.

Furthermore, on May 4, 2018 Foundation Stone of the Marathwada campus was laid on 203 acres land at Siraswadi, Jalna at the hands of then Chief Minister of Govt. of Maharashtra, Shri Devendra Fadnavis, Shri Raosaheb Danve, M.P. and President, Maharashtra BJP, Shri Babanrao Lonikar, Gaurdian Minister and Shri Arjun Khotkar, Minister of State among many others. The State cabinet had sanctioned a budget of Rs 397.00 crore in its meeting held on 24th April 2018

and the utilization and infrastructure creation at both the campuses has started in the right earnest. The places for the campus development have been finalised and have started with the engagement of all the stake holders through discussion. The final plan of Phase I with a financial outlay of nearly 63 Crores has been approved by the Government of Maharashtra and work is expected to begin soon for the construction of the new campus as per AICTE, recommended norms.

Many of the student from the first batch graduating in July 2023 have already received job offers and has secured admission in foreign universities for their future studies.

All the three campuses and the programmes have been approved by the AICTE and the UGC, Government of India.

AWARDS TO ICT IN ACADEMIC YEAR 2022-2023

ICT has been receiving awards, recognising its technological and societal contributions every year and in the academic year 2022-2023, the notable awards received are as stated below:

1. The NIRF ranking 2022 was announced on 15th July, 2022 and ICT was ranked – 14th at University level, 28th Overall, 25th as Research Institute, 18th in Engineering and 7th in Pharmacy.
2. Green University Auditing and Accreditation is a Set of Global Indicators of Sustainability for assessing Governance, Academics, Builtup Spaces, Landscaping, Water Management, Energy Sourcing & Saving, Air Quality Level, Health, Hygiene & Resource Utilization. Green University Audit of Institute of Chemical Technology was conducted by the “Green Mentors” Agency and in August, 2022, ICT has achieved 446 Points out of 500 Points & earned Platinum Ranking in the Platinum Green University Accreditation Standards for the Period of Academic Year 2021-2024. Similarly ICT received the certificates for the Energy Audit and Environment Audit for 2021-2024.
3. ICC-K.V. Mariwala Award for Effective Chemical Industry-Academia Partnership for the year 2021 has been presented to ICT in September, 2022.
4. Institute of Chemical Technology-Indian Oil Odisha Campus has been conferred with the Outstanding Institute Award on 27 April 2022 by the Odisha Education Leadership Awards 2022 Presented by World Education Congress.
5. On 27th April, 2023, ICTM-IOCB was awarded as Best Academic Institutions by Odisha Leadership Awards 2023.
6. Vice Chancellor, Prof. A. B. Pandit has been bestowed upon prestigious “Fellow of United States National Academy of Engineering (US-NAE)” for his contribution to Cavitation Reactors from concept to commercialization, and engineering solutions to improve the lives of under-served people in February, 2023.
7. Prof. A. B. Pandit has been nominated as a member of the CSIR Society for the period of three years vide CSIR Circular No. D.O. No. 18-1(2)/2023-PD/76 dated 23rd March, 2023. Hon’ble Prime Minister of India is the President (ex-officio) of CSIR Society.
8. In July, 2022, Padmabhushan Professor J.B. Joshi has published more than 100 research papers in the premium journal, Chemical Engineering Science. This is a very unique distinction and Honour received by Professor J.B. Joshi. He is only a second author in the history of the journal to have a century of publications to his credit. On this occasion, a virtual special issue commemorating & celebrating this achievement titled “Century in CES” will be published by the journal Chemical Engineering Science to coincide with the upcoming GLS conference in Canada.
9. All India MSME association has been elected for the Honorary Membership of the association

as “Successful Educationalist/Academician” on Professor G.D. Yadav in September, 2022.

10. On 24th February, 2023, Professor G.D. Yadav received Life Time Achievement Award of the Indian Drug Manufacturers Association in Mumbai.
11. Professor Uday S. Annapure, Director, ICT-MAJ has been conferred with Shri Somalal Vyas - SEA Innovation Award 2022 by The Solvent Extractors' Association of India in collaboration with FoodTech Pathshala. This Award is for his successful innovative approach to “Designing of the process for the intensified synthesis of triglyceride of octanoic acid with an application of sonication and evaluation of frying characteristics of octanoic acid” in September, 2022.
12. Professor Vandana Patravale crossed 10,000+ citations as per google scholar record in September, 2022.
13. The Council of the Indian Chemical Society has nominated Prof. Vandana Patravale for Professor R S Varma Memorial Award, 2022 in recognition of her scholastic contribution to the field of chemical sciences. The Award will be formally given at the 59th Annual Convention of Chemists of the Indian Chemical Society to be held during December 16-18, 2022 at the Department of Chemistry & Chemical Biology, Indian Institute of Technology (ISM), Dhanbad, Jharkhand.
14. Professor Parag Gogate, Department of Chemical Engineering has been elected as a Member of Council of the Indian Institute of Chemical Engineers (IIChE) 2022 in September, 2022.
15. Professor Parag Gogate was honoured with ‘Malaviya Memorial (Senior Faculty) Award’ for the year 2021 by the Biotech Research Society (BRS) on 7th December, 2022.
16. Professor P.D. Vaidya, Department of Chemical Engineering has been selected for ‘Professor M.M. Sharma Science and Technology Award’ by the Marathi Vidyan Parishad on October 20, 2022.
17. Dr. Prajakta Dandekar-Jain from Department of Pharmaceutical Sciences and Technology received “Uncha Maza Zoka” award from Z Marathi for her research in pharmaceutical biotechnology in August, 2022.
18. Dr. Prajakta Dandekar Jain has been bestowed by the Swami Vivekanand Yuva Puraskar award for 2022 by RSS Jankalyan Samiti Maharashtra Prant on 18th January, 2023.
19. Dr. Nitu Jha has won the “Climate Hackathon Challenge Award” in the “What industries should do to mitigate climate change?” Energy Swaraj Foundation has selected her for this Award for her unique ideas on climate change action and environmental correction in November, 2022.
20. Dr. Nitu Jha has been selected for the membership in the Indian National Young Academy of Sciences (IN-YAS) in February 2023 for the period of 5 years.
21. Dr. Aarti More has been bestowed by the Technical Paper award under the institute category at the 30th and 31st Indian paint conference organized by Indian Paint Association on 20th January, 2023.
22. ICT student team led by Suraj Kapale & Harshal Patil (Zero Spillage Milking Can) & Ameya (Preservative Free Juices) for showcasing an innovative concept & winning a Prize of Rs.1 Lakh each in the specified category of Smart India Hackathon 2022 organised by AICTE at IIT Roorkee in August, 2022.
23. ICT's Startup, S4S Technologies Pvt. Ltd., led by our Alumnus Dr. Tushar Gaware was highly acclaimed by the Hon'ble Prime Minister Shri Narendra Modi during Kisan Sammelan 2022 held on 17th October, 2022. Kisan Sammelan 2022 had 300 startups and the PMO office short-listed 5 of them for one-to-one interaction of PM with the proprietor. Dr. Gaware explained about the unique business model, revenue generation, and empowerment of women through micro entrepreneurship to Hon'ble Prime Minister.

ICT CONNECTIVITY WITH INDUSTRY

The role of industry in promoting education and research at ICT has its roots in its foundation. Leading industrial magnates from textile and chemicals industry and philanthropists donated funds to establish many faculty positions (amounting to 19 such endowments) and laboratories right from its humble beginning and research started from the inception keeping faculty engaged in development of industry. Faculty used to offer free consultation to industry until 1955 for its growth and many new industries (nearly 600 first generation entrepreneurs) were started by ICT graduates, contributing to the industrial growth of the nation. This interaction and collaboration is even more today.

With the help of almost 100 research projects currently functioned at ICT from the Government and industry, new laboratories, creation of additional infrastructure, ICT is striving hard to meet the aspirations of all the stake holders.

ICT has been closely working with industry and the Government ever since its inception in the interest of the nation. Currently several active MOUs with many national and international renowned universities in USA, Canada, UK, Germany, France, Australia, Finland, Spain, and with multinationals such as Mitsubishi, Huntsman, Unilever, Biorad, Coka Cola, Pepsico, Reliance, etc. are in place (www.ictmumbai.edu.in). Bestowed with numerous awards and accolades, ICT has created a niche for translational research and technology development and transfer and is often cited as an role moel for Academia and Industrial connect.

ICT : CULTURE, CREATIVITY AND CONNECTIVITY

- Three campuses from 2018-19
- 3 Padma Vibhushan, 8 Padma Bhushan, 8 Padma Shri awardees; 2 Fellows of Royal Society (among 5 engineers from India); Several Fellowships- FNA, FNASc, FNAE, FRSC, FTWAS, MUSAE, 6 faculty and Alumni as US National Academy of Engineering
- Over 500 first generation entrepreneurs, some owners of Fortune 500 Companies;
- 640 ongoing Ph D Students
- Masters (331 First Year +225 Second Year)
- 360 UG Scholarship
- 41 Ph Ds during Eleventh interim Convocation (virtual) on August 24, 2021, 35 Ph Ds during Eleventh Convocation (virtual) on March 24, 2022, 27 Ph Ds during Twelfth interim Convocation on August 10, 2022 and 33 Ph Ds during Twelfth Convocation on March 4, 2023
- 100+ UG Summer Researcher Fellows
- Highest citation per faculty
- Annual citations more than 10,000
- SCOPUS Awards: 4 faculty in top 10 Chem Engg and 2 in top Chemistry faculty in India: 20th March 2018
- 7 Fellows of INSA, 4 Fellows of TWAS, 3 JC Bose Fellows, 6 Fellows of US National Academy of Engineering
- 23 Endowment Chairs; 15 UGCFR, 8 INSPIRE, 2 Ramanujam, 2 Ramalingaswami fellows
- 49 Endowment Visiting Fellowships; 11 endowments for library
- India's first five Ph Ds in Engineering and from ICT in 1941-42
- 406 Patents filed in last 10 years and more than 400 international publications /year, highest Publications/faculty
- 104 Projects including those from multinational industries

- Many technologies transferred to industry and start-up incubated in ICT
- Highest number of Prime Minister's Ph.D. Fellowships

ICT is not just a Chemical Technology Institute but covers all branches of Chemical Sciences, Engineering and Technology; Product Engineering; Biological Sciences, Engineering and Technology; Materials Sciences and Engineering; and Energy Science and Engineering. Whatever is designated by Nano, Bio and Green Technologies are researched in all departments of ICT.

A recent Sci-Val data analysis (Elsevier) shows the ICT, despite its being a State funded institute, is highly productive and recognised institute (Feb. 2019) and is among top 4 among all disciplines in the country and number 1 in Chemical Engineering.

a) Benchmarking in All Disciplines among Leading Indian Institutes and Universities

Name	Scholarly Output	Field-Weighted Citation Impact	Outputs in Top 10 citation percentile (%)	Collaboration (%)
Indian Institute of Science Bangalore	26271	1.07	13.1	26.1
Indian Institute of Technology, Bombay	20617	1.1	12	26.6
Indian Institute of Technology, Delhi	19297	1.12	13.1	20.8
Indian Institute of Technology, Kanpur	14162	1.03	12.2	25.2
Indian Institute of Technology, Kharagpur	22111	1.06	12.5	19.7
Indian Institute of Technology, Madras	19640	1.02	11.4	24
Institute of Chemical Technology	4165	1.07	19	13.7
University of Pune	6312	0.99	10.8	20.7

b) Bench-marking in Chemical Engineering Discipline

Name	Scholarly Output	Field-Weighted Citation Impact	Outputs in Top 10 citation percentile (%)	Collaboration (%)
Indian Institute of Science Bangalore	1824	1.4	24.8	21.1
Institute of Chemical Technology	1726	1.26	25.1	15.2
Indian Institute of Technology, Kharagpur	2333	1.17	20.5	17.7
Indian Institute of Technology, Kanpur	1427	1.15	19.8	21
Indian Institute of Technology, Bombay	1982	1.09	18.3	22
Indian Institute of Technology, Delhi	1942	1.08	18.2	20.5
Indian Institute of Technology, Madras	2300	0.97	15.3	18.4
University of Pune	544	0.95	18.6	22.8

WHY ICT IS IN ODISHA?

The economy of Odisha is one of the fastest growing economies amongst various States in India. According to recent economic survey, Odisha's gross state domestic product (GSDP) is expected to grow at around 8.5% during current fiscal year. Education is the key enabler of economy of any State; in particular, higher technical education along with related research and innovation. In order to develop any State as preferred destination for industrial services, R&D, it is necessary to invest in training high-quality manpower and develop indigenous technology. This shall enable the State to seize the emerging opportunity and ensure a rate of satisfactory growth.

The primary industries in Odisha are manufacturing; mining & quarrying; electricity, gas and water supply & construction along with considerably less explored Agri-processing industry. The industrial sector's contribution to the state's GSDP by almost 35%. Most of Odisha's industries are mineral-based. Odisha has 25% of India's iron reserves. It has 10% of India's production capacity in steel. Odisha is the top aluminium producing State in India. Two of the largest aluminium plants in India are located in the state. Odisha is the first State in India to reform its power sector and become surplus power generating state.

Similar to Maharashtra in the past, recent years have witnessed large projects in Odisha like Indian Oil's 11th Refinery at Paradip, envisioned as the Energy Gateway to Eastern India, the 15 MMTPA Refinery has been set up at an estimated cost of Rs. 34,555 crore. Other mega-projects include large Coal Gasification Plant at Angul, World's Largest Phosphatic Fertilisers Plant at Paradip, Vegetable Oil Plant at Paradip to name a few. Govt. of India's PSUs, RCF and GAIL are embarking a large scale Fertiliser Plant at Talcher using gasification of coal. Based on Petroleum Refinery at Paradip, Govt. of India has also approved setting up a Petroleum, Chemical, Petro-

chemical Investment Region (PCPIR) for which Govt. of Odisha has earmarked 250 sq. km of land. Indeed all these sectors are linked to ICT's educational and teaching/training portfolio and strength. Therefore, it was felt by ICT and endorsed by Hon'ble Minister the need of a World Class Centre of Excellence in Chemical Engineering and Technology in Odisha to catalyse structured and focused growth of petro-chemical, chemical, polymer, textiles and fibres, herbal and pharmaceuticals, pesticide, Speciality Chemical and fine chemicals, perfumers and flavours, rubber chemicals industry in Odisha. All of these For SEZ, PCPIR and Innovation hubs in Pharmaceuticals, Govt. of Odisha needs extensive and innovation input from Institute like the ICT, Mumbai. The Govt. of Odisha has been kind enough to allot over 73 acres of land to start our own campus and the plan and the grand vision has already been discussed at the highest level with a proactive participation of Hon. Minister Shree Dharmendra Pradhan and the Chief Minister Hon, Shree Naveen Patnaik.

INNOVATIVE PROGRAMMES AT ICTM-IOC BHUBANESWAR AND COLLABORATION WITH IIT-KHARAGPUR

As a consequence to the MOU between IOC and ICT on 16th November 2017, a proposal was submitted to the IOC Board giving the details of plan to promote several activities including setting up of campus at Bhubaneswar.

1. Integrated M. Tech. after 12th Standard (HSSC) of 5 years duration consisting of 15 trimesters with alternate term in industry, with major in Chemical Engineering and minor in 6 different disciplines. To ensure improved quality and industry relevance in curricula development for integrated M. Tech. (6 trimesters in industry and 9 in institute) in the field of Chemical Engineering as major branch with minor in Petrochemicals, Textiles, Polymers and Materials, Foods and Pharmaceuticals, and Energy Engineering. The last two trimesters will be for promotion of experimental and design project to promote entrepreneurship and start-up companies.
2. Executive M. Tech. (1 month in classroom followed by 2 months in parent company for 2 years) for industrial personnel
3. Ph. D. programmes in various disciplines.

All these programmes are new and were introduced in India for the first time and are currently in its third year of running. During the industrial internship the industry will be requested to offer stipend making the education affordable to one and all. IIT Kharagpur has signed an MOU with ICT for running the Executive M. Tech. (e-M.Tech.) together whereby the student will spend time on both campuses and also they will partner in creation of Centres of Excellence in Research and Innovation. Currently the IIT-KGP extension Centre in Bhubaneswar is currently made available for ICTM-IOCB programmes. The campus is equipped with modern and sophisticated instruments for carrying out high class research and innovation at these proposed Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, etc. for the country and especially the region.

Executive M. Tech. Degree (e-M.Tech.) Programme: (Two Years with Alternate Short Terms in Class Room (1 month) and Parent Industry (2 months))

Executive MBA programmes are run for working professionals by various management institutes which typically cater to management of business, finance, and administration. This programme is different from them. The idea behind launching this programme is to train executives having industrial experience with managerial experience or responsibilities who could rise to the top of the organisation with training and research in technical field in an industrial set up. The programme is of two years duration.

The executive M Tech program (e-M.Tech.) is thus geared at giving training in research,

innovation industrial practices, law, sustainability and management to experienced and senior professionals who want to continue to work without losing continuity in the work place and also be a student pursuing a degree. There is a subtle difference in this program in comparison with other programs. These executives are many times involved in issues related to research, innovation, business expansion, environment, law and human resources, plant operation, design and development, marketing. In many PSUs, it is found that some are transferred to R and D or plant operations, without having any idea of the field resulting into considerable loss of time and resources.

The executive from all process industries are eligible for this programme. These industries range from all large scale industries to small scale industries – Refinery, Coal, Energy, Chemicals, Polymer, Materials, Steel, Pharmaceuticals, Food Processing, Biotechnology, Fertilizers and the like. They will study in the class room on the campus for a short term of 4 weeks during which s/he will undergo course work in different subjects as well as start literature search and plan for research. They will continue to carry out the research activities in the parent industry during alternate terms. During the parent industry term (PIT), s/he will continue the research work, home assignments, and other related course work. The student is continuously monitored and participates in classroom discussions, home assignments and research project. The e-M. Tech. student is also supposed to mentor one-two students from the Integrated Master's degree programmes during their industrial internship. The student will be co-guided by two faculty members, each from ICT and IIT.

ICT IN MARATHWADA

The economy of Maharashtra is one of the fastest growing economies amongst various States in India and the Marathwada region needs a lot of development from the view point of high quality education and industrial development. ICT was therefore asked by the State Government to set up an off campus site there which was enthusiastically supported by ICT Alumni from the region. According to current economic survey, gross state domestic product (GSDP) is expected to grow at around 8.5% during current fiscal year inspite of the current pandemic. Education is the key enabler of economy of any State; in particular, higher technical education along with related research and innovation. In order to develop any State as a preferred destination for industrial services, R&D, it is necessary to invest in training high-quality manpower and develop indigenous technology. This shall enable the State to seize the emerging opportunity and ensure a rate of satisfactory growth. Jalna region has been identified as region of Mosambi, under the programme of one product one region. MOU has been signed with Praj Industries Ltd., Pune to develop and process the products coming out of Mosuambi.

INNOVATIVE PROGRAMMES AT ICT MUMBAI MARATHWADA CAMPUS JALNA

The programmes similar to those conducted at ICT IOC Bhubaneswar campus will be conducted. The executive M. Tech. programme will be taken up later.

1. Integrated M. Tech. after 12th Standard (HSSC) of 5 years duration consisting of 15 trimesters with alternate term in industry, with major in Chemical Engineering and minor in 6 different disciplines. To ensure improved quality and industry relevance in curricula development for integrated M. Tech. (6 trimesters in industry and 9 in institute) in the field of Chemical Engineering as major branch with minor, (i) Petrochemicals, (ii) Foods Engineering & Technology, (iii) Pharmaceuticals Engineering, (iv) Lipid Technology, (v) Polymers and Materials Engineering & Technology, (vi) Speciality Molecules Engineering, and (vii) Energy Engineering
2. Ph. D. programmes in various disciplines.

Centres of Excellence will be created in collaborative mode as stated above and the first one will be COE in Cellular Agriculture with participation of industry and an MOU is signed with Good Food Institute in this regard and also Praj Industries Ltd., Pune.

Engineering Challenges and Social and Industrial Relevance of programmes

If you are admitted to this grand institution, which is strictly based on merit, it is assured that the education you receive will be of the highest order and, in the years to come, will place you at the cutting-edge of science and technology where you will develop products and services that greatly improve the lives of those around you. Do you wonder as to what relevance these programmes have vis-a-vis 'white collared' engineering programmes and are these programmes as rewarding? No virtual world can be created without materials produced by niche and eco-friendly sustainable technologies. We all live in the world of chemicals, molecules and products, which are transformed to give quality and longevity to life. In this context, let me direct your attention to the "Grand Challenges", as they are referred to by the US Academy of Engineering though very global in nature and these are:

- | | |
|--|------------------------------------|
| 1. Advancing health informatics | 2. Engineering better medicines |
| 3. Making solar energy more affordable | 4. Providing access to clean water |
| 5. Reverse-engineering the human brain | 6. Advancing personal learning |
| 7. Engineering tools for scientific discovery | 8. Managing the nitrogen cycle |
| 9. Providing clean energy from fusion | 10. Securing cyberspace |
| 11. Preventing nuclear terror | 12. Enhancing virtual reality |
| 13. Developing new methods of carbon sequestration | |
| 14. Restoring and improving urban infrastructure | |

All these challenges are uniquely physicochemical in nature and an education in chemical engineering or chemical technology particularly, empowers and enables you to tackle these. There is a confluence of chemical sciences and engineering with biological sciences and engineering. The technologies related to producing advanced materials, clean energy generation and storage, medicines, high-end drugs, nutraceuticals, food products, fertilizers, agrochemicals, polymers, surface coating materials, laser dyes, colorants, pigments, adhesives, textiles, fibres, oleochemicals, surfactants, lubricants, water treatment and purification, air pollution abatement, bio-processing, downstream processing and a myriad of related issues involve high degree of science and engineering. How are we going to feed billions of people, remain in harmony with nature, and develop sustainable processes and technology? What will be their energy and material needs? Life expectancy is getting extended. Addressing these challenges requires a multifaceted effort that traverses the fields of chemistry, engineering, biotechnology, information technology and nanotechnology, engineering mathematics, environmental engineering and the curriculum and courses offered in various programmes at the Institute have judiciously incorporated subjects from all these disciplines. Our programmes directly allow being on the forefront of these rewarding careers. The new challenge in the form of COVID 19 has prompted us to come up with new and an innovated thought processes which has to be evolved with new priorities to be listed out, coupled with the directives suggested by the National Educational Policy (NEP), 2020.

More importantly, you will be tutored and mentored by some of the nation's most eminent scientists and engineers who themselves are the vanguard of research in these fields, thereby ensuring that the knowledge passed onto you is pertinent, real experience and updated. Teaching without research is barren and our planners thus were visionary in bringing research component

in our teaching to solve real problems. These researcher-cum-teachers are always on their toes and work longer hours to be on the forefront. This invigorating atmosphere is witnessed in my institute. There is no nine-to-five culture; working extended hours is a habit here imbibed by students and teachers alike. Besides, a large number of members the ICT faculty acts as consultants/advisors to industry with a strict condition that no institutional material facility is used for these industrial consultations. Research projects investigated in our labs are of both academic sanctity and industrial relevance. So the proverbial 'Practise what you preach' is indeed executed by the faculty members, which also gets translated in their teaching; many of them actually earn their salaries through the one-third share of the consultation fees paid to the institute.

The Institute's strong multi-disciplinary research programmes have helped create a unique learning environment that places great emphasis on synergizing knowledge from several sources to develop creative and effective solutions to many of the problems faced in industry and society. This eclectic combination of a rigorous and up-to-date curriculum, excellent laboratory and demonstration facilities, world-renowned faculty and a conducive learning environment brimming with the next generation of great minds that sets the Institute apart. The ICT is held in high esteem by other premier institutes, industry and government for many of its unique characteristics and achievements. All of them deem that ICT is different; distinctly and significantly different! Outsiders always wonder how a small university department, with poor funding has managed to excel and that too without any public glare or publicity? The magic mantra for our success is a concoction of dedicated faculty, meritorious students, admirable support staff, distinguished alumni, strong connect with industry, and assistance to all needy students, a grand alumni association and above all relevance of our programmes in national wealth creation.

CLOSING REMARKS

"I am sure by now you would have realized as to why the ICT is held in high esteem and its uniqueness and heritage among all institutes of higher learning in India and looked to lead the new initiatives proposed by NEP 2020. Great institutes are not built overnight. All the academics of ICT, who act as researcher, consultants to industry, member of several important professional bodies and government committees since its inception and based on the interactions with alumni, government officials, faculty from leading institutes in India and abroad, can reveal a trend- that is- quality of education, the brand name of institute and future prospects, far outweigh any other consideration on the minds of students and employers, foreign universities admitting ICT's UG students for PG courses alike, while choosing an institute, than the cost of education. Indian parents sacrifice many things to educate their off-springs in the best of schools and colleges; many times not fully knowing about the institute or the courses they offer.

If you get selected through our admission process, which is transparent and strictly on merit, with all government policies in place, my congratulations and best wishes to you. I hope I have convinced you, to join this great institute. The opportunities that lie in store for you during your years with us and once you graduate will truly be enormous, if you are sincere, committed and motivated to learn. If you are unlucky this time because you fall short of the cut-off criteria at undergraduate level, try again for master's and Ph.D. programmes after your graduation. Should your destination be some other place for whatever compelling reasons, let me wish you the very best for all your future endeavours.

The Rich. The Poor. The Marginal. The Privileged. The Underprivileged all have studied here. They made it BIG. Do not ask how to do. Do it. Underestimate NOT, who you could be. Think Big. Dream Big. Do not dismiss your dreams and see, how you can contribute to the nation and the society. To be without dreams is to be without hope; to be without hope is to be without purpose.

The very best to you; wherever you go.

Prof. Aniruddha B. Pandit





NATIONAL AND INTERNATIONAL CERTIFICATION



Ministry of Education
Government of India



Certificate

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2022

Institute of Chemical Technology, Mumbai
Ranked 28 in Overall Category

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education
Government of India



Certificate

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2022

Institute of Chemical Technology, Mumbai
Ranked 14 in University Category

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education
Government of India



Certificate

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2022

Institute of Chemical Technology Mumbai
Ranked 7 in Pharmacy Category

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education
Government of India



Certificate

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2022

Institute of Chemical Technology, Mumbai
Ranked 18 in Engineering Category

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



Ministry of Education
Government of India



Certificate

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

INDIA RANKINGS 2022

Institute of Chemical Technology, Mumbai
Ranked 25 in Research Category

CHAIRMAN, NBA

MEMBER SECRETARY, NBA



QS Asia University Rankings | 2022

qs.com

Institute of Chemical Technology (UDCT), Mumbai

183=

in QS Asia University Rankings 2022

November 2021

Ben Sowter, Senior Vice-President,
QS Quacquarelli Symonds





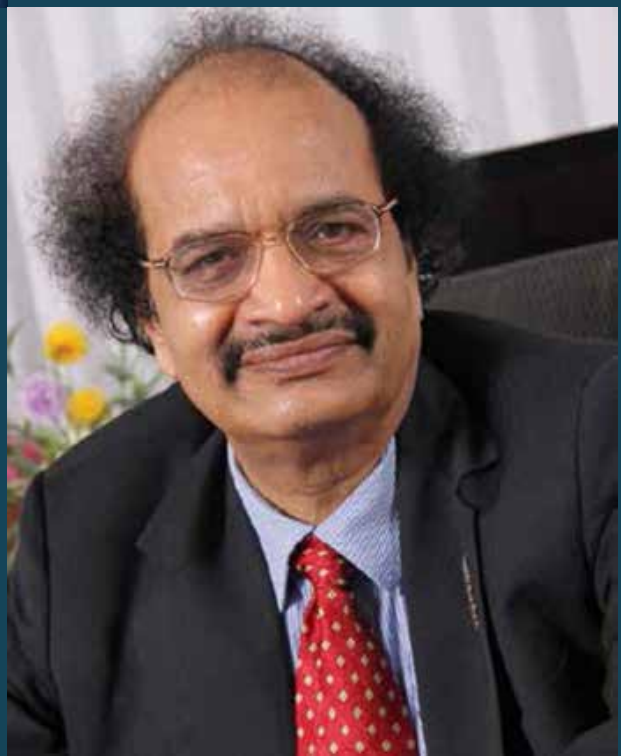
DISTINGUISHED FACULTY

**PADMA VIBHUSHAN
PROF. M. M. SHARMA**
Emeritus Professor of Eminence
Former Director, UDCT (ICT)



**PADMA BHUSHAN
PROF. J. B. JOSHI**
Emeritus Professor of Eminence
Former Director, UICT (ICT)

**PADMA SHREE
PROF. G. D. YADAV**
Emeritus Professor of Eminence
Former Vice Chancellor, ICT



**VICE CHANCELLOR****PROF. ANIRUDDHA PANDIT**

Ph.D.(Tech.), B. Tech. (Chem.)

(FTWAS, FNA, FASc, FNAE, FNASc, FMASc)

Professor, UGC Research Scientist,

“C” (Professor’s Grade)

J. C. Bose National Fellow (DST, Govt. of India)

RESEARCH INTERESTS:

Physical and Chemical Processing applications of Cavitation phenomena, Sonochemistry, Ballast Water Treatment, Mixing in Mechanically agitated contactors: Experimental and CFD Investigations, Modeling of Stoves, Use of non-conventional energy sources, Synthesis of Nanomaterials Biotechnology: Protein modification, Cell disruption and Microbial fuel cell.

Aniruddha B. Pandit was born on 7th December 1957 in Mumbai, Maharashtra. He earned his B. Tech (Chem) degree from Indian Institute of Technology (IIT), Banaras Hindu University in 1980 and earned his Ph.D. (Tech) degree from University Department of Chemical Technology (now ICT), in 1984. From 1984 till 1990 he worked in the Department of Chemical Engineering, University of Cambridge, United Kingdom as a Research Assistant & then as a Research Associate with Prof. J. F. Davidson, working in the area of bubble break-up and design of multiphase reactors. He developed many novel designs of gas-liquid contactors and also developed new impeller designs.

ACADEMIC & RESEARCH CONTRIBUTIONS: After returning to India in 1990, he joined ICT as a UGC Research Scientist ‘B’ and was subsequently promoted to Scientist ‘C’ (Professor’s Grade) in 1996. He was instrumental in starting a major activity & program in the area of Hydrodynamic Cavitation for intensification of physical and chemical processing applications. He has successfully exploited the cavitation phenomena for a variety of operations such as crystallization, emulsification, nano-particle synthesis and processes such as esterification, oxidation etc on industrial scale. He has been an active industrial consultant for many large size national and international companies.

A unique creative approach of using fundamental knowledge, coupled with simple, elegant experiments has resulted into novel cavitation reactors. Prof. Pandit has authored over 400 publications, 5 books and over 12 chapters (with over 21700

Subjects Taught: Environmental Engineering and pollution control Chemical Project Economics, Design of Multiphase Reactors

Recognized Research guide for

Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology, Ph.D. (Science) in Chemistry

Guided students:

Ph.D. : 63, Masters : 102

Total Research Publications :

National/International : Total Publications: 448 (SCOPUS), Citations: 24560 (SCOPUS)(May 2023), H-Index: 84 (SCOPUS) (May 2023)

Patents (granted in last 5 years): 47

AWARDS:

Indian National Academy of Science (INSA), Best Teacher Award, 2012; Sir J. C. Bose Fellow of the Department of Science and Technology, Government of India, 2015; Vishwakarma Medal, Indian National Academy of Science (INSA), 2015; Fellow The World Academy of Sciences (TWAS), 2015

Awards:

- ISTE National award for outstanding research, 1995

- Prof. R.A. Rajadyaksha Best Teacher award, on 15 occasions in the past 20 years
- VASVIK award, 1996
- Fellow, Maharashtra Academy of Science 1997
- IChE - Herdilia award for excellence in basic research, 2001
- Distinguished Alumnus award, Institute of Technology-Banaras Hindu University, 2004
- Distinguished Alumnus award, UICT, 2008
- INSA, Best Teacher award, 2012
- Vishwakarma Medal of Indian National Science Academy 2015
- Fellowships of, Maharashtra Academy of Sciences, 2000
- Indian National Academy of Engineering, 2006, Indian Academy of Sciences, 2008
- Indian National Science Academy, 2009
- National Academy of Sciences in India, 2009
- Fellow of TWAS 2015
- Nominated as a member of the CSIR Society, Government of India, 2023
- Secured First Position as Scientist in India in the Engineering and Technology field by Research.com, 2023
- Selected as 'Fellow of the United States National Academy of Engineering (US-NAE)' 2023

(SCOPUS) and has 33 applied and granted patents & is on the Editorial board of five International Scientific Journals. He has guided 58 PhDs and 94 Masters students so far.

OTHER CONTRIBUTIONS : In addition to his research contribution, Prof. Pandit has contributed to innovation in teaching, at graduate and undergraduate levels, demonstration experiments for elaborating the physical principles of many chemical engineering operations. He is actively involved in working with committees in the area of harnessing solar energy & with tribal population in extending the chemical engineering principles for drying of farm/ forest product & water disinfection for potable water. He is a president of a NGO named Land Research Institute dealing with the Energy and Town planning sector.

Administrative Contributions: Prof. Pandit has taken over the charge as Vice Chancellor of Institute of Chemical Technology on November 29, 2019. Prior to this, he has acted as a Dean in his capacity of Human Resource and earlier as Dean of Research Consultancy and research Mobilization. He has been the coordinator of ICT-DAE center for Chemical Engineering Education and Research since its inception in 2008. He is on the editorial board on 5 international journals and is an associated editor of Ultrasonic Sonochemistry. He has successfully guided and completed international science collaborations with Universities from France, Australia and The Netherlands. He is also on the project appraisal and evaluation committees of the DST and UGC, Govt of India. He is currently serving as a member of the BOG of the IIT Bombay. He has been an active industrial consultant to many national and international industries.



EMERITUS PROFESSOR OF EMINENCE
PROF. M. M. SHARMA

B. Chem. Eng., M.Sc. (Tech.) (Bombay), Ph. D. (Cambridge), D.Sc.(h.c.) (I.I.T., Bombay; Delhi; Kharagpur; B.H.U.; Roorkee) (Calcutta) (Kanpur) (Bundelkhand) (Lucknow) (h.c.), LL.D. (Mumbai) (h.c.), FREng, FRS, FNA, FASc, FNASc, FTWAS, C Chem, FRIC (U.K.), C. Eng., FIChE (U.K.), FIChE, FICS, FBRS
email: profmmsharma@gmail.com

Man Mohan Sharma FREng (born May 1, 1937 in Jodhpur, Rajasthan) is an Indian chemical engineer. He was educated at Jodhpur, Mumbai and Cambridge. At the age of 27 years, he was appointed Professor of Chemical Engineering in the Institute of Chemical Technology (UDCT), Mumbai. He later went on to become the Director of Institute of Chemical Technology (ICT/ UDCT/ UICT), the first chemical engineering professor to do so from ICT.

In 1990, he became the first Indian engineer to be elected as a Fellow of Royal Society, UK. He was awarded the Padma Bhushan (1987) and the Padma Vibhushan (2001) by the President of India. He has also been awarded the Leverhulme Medal of the Royal Society, the S.S. Bhatnagar Prize in Engineering Sciences (1973), FICCI Award (1981), the Vishwakarma medal of the Indian National Science Academy (1985), G.M. Modi Award (1991), Meghnad Saha Medal (1994), and an honorary Doctor of Science degree from Indian Institute of Technology, Delhi (2001). Man Mohan Sharma obtained Bachelor of Chemical Engineering (1958) from UDCT (ICT) and subsequently MSc (Tech.) in 1960. He obtained Ph.D. (Chemical Engineering) (1964) at Cambridge University with PV Danckwerts. In 1964, he returned to India as Professor at the University of Bombay, and later became Director of the University Department of Chemical Technology (UDCT), now ICT (Institute of Chemical Technology - A Deemed to be University). He served the institute for 33 years. He has been honored by several universities including IITs by honorary doctorates.

Awards

Professor Sharma is a recipient of a number of prestigious academic honours and awards. He is a Fellow of the Indian Academy of Sciences, Bangalore, Honorary Fellow of the National Academy of Sciences (India), Allahabad, Fellow of the Royal Society, London. Subsequently he was elected Honorary Fellow by the Royal Academy of Engineering and is Foreign Associate of the US National Academy of Engineering. He is recipient of Padma Bhushan and Padma Vibhushan.

Academic Career

Professor Sharma made contributions to chemical engineering science and technology. His studies on Bronsted based catalysis in CO₂ hydration (published in the Transactions of Faraday Society) and subsequently kinetics of COS absorption in aqueous amines and alkanolamines brought out linear free energy relationship between CO₂ and COS absorption in solutions of amines and alkanolamines. He has contributed extensively on the role of microphases in multiple reactions which he pioneered. He also became an independent Editor of Chemical Engineering Science at a young age. He taught different subjects in chemical engineering and encouraged his doctoral students, from the very beginning, to publish independently their work in renowned journals.

Under his stewardship, UICT got autonomy of UGC. He brought about all-around improvement in all the departments of the Institute leading to exceptionally high number of Ph.D.s each year based on the number of faculty members. He served in Petroleum and Natural Gas as Chairman of the SAC and in the SAC to Cabinet and PM. He was INSA Council Member (1980-82) and Vice President (1987-88).



EMERITUS PROFESSOR OF EMINENCE PROF. J.B. JOSHI

B.Chem.Eng., M.Chem.Eng., Ph.D. (Tech.)

FNA, FTWAS, FASc, FNAE, FMASc

Emeritus Professor, Homi Bhabha National Institute;

Adjunct Professor, Department of Chemical

Engineering; Louisiana State University, USA and

Curtin University, Australia

Former Director, ICT Mumbai.

Professor Jyeshtharaj Bhalchandra Joshi is an outstanding chemical engineering professional who has developed novel processes, designs, products and implemented in large, medium and small-scale industry including design of more than 1000 reactors for commercial operation. He has developed efficient designs of cookers and stoves and held more than 300 workshops for promoting science awareness among school going students. As President of Marathi Vidnyan Parishad, he has been actively driving the task of improving scientific temper of the society through different activities. Professor Joshi has done truly outstanding work in the area of multiphase reactors which has been widely acclaimed. He has succeeded admirably in developing design procedures for multiphase sparged and mechanically agitated reactors, which form heart of the chemical process industry. He was Director of ICT (1999-2009). Professor Joshi has guided 91 Ph.D. and 60 Masters thesis. He has published more than 500 papers in international cited journals and more than 60 state of the art reviews/ monographs/ book chapters. He has more than 17000 citations and h-index of 64. He has been honoured with Padma Bhushan by the President of India. He has passion to interact with students and young professionals for mutual inspirations and service to society.

The list of prominent awards includes: Fellowship of TWAS, INSA, IASc, INAE; S.S. Bhatnagar Prize 1991 (CSIR), Young Scientist Award 1981 (INSA), Amar-Dye-Chem Award 1983 (IChE), Young Associate 1983 (IASc), Fellow Maharashtra Academy of Sciences, 1987, Herdillia Award 1989 (IChE), Maharashtra State National Award 1991 (ISTE), VASVIK Award 1992, Diamond Award 1994 (UDCT), Dr. K.G. Naik Gold Medal 1995 (MS University Baroda), Chemtech Foundation Award, Goyal Foundation Award 1998 (Kurukshetra U), Vishwakarma Medal 2000 (INSA), 2000; State Best Teacher Award 2004 (Maharashtra), Dr. Anji Reddy Innovator of the year Award 2005 (IChE), Diamond Award 2007 (IChE), J. C. Bose Fellow, 2008 (DST), Life Time Achievement Award (Indian Chemical Council), Sayed Husain Zaheer Medal 2008 (INSA), ICT Superstar 2012 (ICT Mumbai), Eminent Engineer Award 2018 (Engineering Council of India), Lakshya Distinguished Leadership Award 2018 (NITIE Mumbai).

AWARDS:

Padma Bhushan (Govt. of India, 2014),

Shantiswarup Bhatnagar Prize (Engineering Sciences, 1991),

Eminent Engineer Award

(Engineering Council of India, 2018). Elected to the US National Academy of Engineering: For research, innovation, and education in green chemistry, catalysis, nanotechnology, and chemical engineering leading to clean and green technologies.

Subjects Taught:

Fluid Mechanics, Multiphase Reactor Design

Research Interests:

Fluid Mechanics, Multiphase Reactor Design, Computational Fluid Dynamics, Atomic Energy, Solar Energy, Bio-Energy.

Recognized Research Guide for: Ph.D. (Tech.) in Chemical Engineering, Nuclear Engineering, Ph.D. (Science)

Guided students: Ph.D. 86, Masters: 60

Post Doctoral: 24

Total Research Publications -

National : 25

International: 500

Current Students:

PhD. 10

Masters: Nil

Post-Doctoral: 4

Citations: 16203 (according to Scopus)

H-index: 62 (according to Scopus)



EMERITUS PROFESSOR OF EMINENCE **PROF. G. D. YADAV**

*B. Chem. Eng. Ph.D. (Tech.), D.Sc. (Hon. Causa, DYPK),
FTWAS, FNA, FASc, FNASc, FNAE, FRSC (UK),
FISTE, FICHEM (UK), FIICHE, FICS*

Former Vice Chancellor and R.T. Mody Distinguished Professor

Tata Chemicals Darbari Seth Distinguished Professor of Innovation and Leadership

J.C. Bose National Fellow (Govt. of India)

Adjunct Professor, RMIT University, Melbourne, Australia

Adjunct Professor, University of Saskatchewan, Saskatoon, Canada

Conjoint Professor, University of New Castle, Australia

Padmashri by President of India (Fourth Highest Civilian Honour)

Research Interests :

Green Chemistry and Technology (Fundamental and applied aspects of green chemistry and engineering, particularly in the design and development of benign and eco-efficient processes in the chemical and allied industries such as bulk chemicals, intermediates, pharmaceuticals, fine chemicals, perfumes and flavours, and inorganics); Catalytic Science and Engineering (New catalytic materials, phase transfer catalysis, ionic liquids, reactions in supercritical carbon dioxide, catalysis modelling and simulation, biocatalysis in non-aqueous media, synergism of chemical catalysis with microwaves and ultrasound, and cascade engineered catalysis, renewable materials as feedstock for value added chemicals, biorefinery); Nanomaterials and nanocatalysis (Solid acids, superacids and bases, supported metals as nanocatalysts, sulphated zirconia, UDCaT series of novel catalysts, ion exchange resins, heteropoly acids, clays, and zeolites, novel redox materials, carbon nanotubes); Biotechnology (Enzyme catalysis in pharmaceutical transformations in non-aqueous media, chiral separations, biomass conversion, biorefinery, Synergism of Microwaves and Enzymes); Energy Engineering (Petroleum Engineering, Flow through porous media, Network modelling, Novel methods of enhanced oil recovery; Coal conversion, Hydrogen generation and storage)

Professor G.D. Yadav was conferred Padmashri By the President of India in 2016. He has won over 125 national and international honours, awards, fellowships, editorships, etc. Several Life Time Achievement Awards have been bestowed on him by prestigious organizations. He is an elected Fellow of all National Science and Engineering Academies in India which is rare: Indian National Science Academy (INSA), Indian Academy of Sciences (IASc), National Academy of Sciences, India (NASI), Indian National Academy of Engineering (INAE) and The World Academy of Sciences, Trieste (TWAS). He is a Fellow of Royal Society

of Chemistry, UK, Institution of Chemical Engineers, UK, Indian Institute of Chemical Engineers, Indian Chemical Society, and Indian Society for Technical Education, among others. He is one of the topmost engineering scientists and academicians in India, who despite being an administrator, is still actively involved in guiding Ph.D., patenting, publishing, consulting and transferring technologies to industry. He has given more than 670+ talks including prestigious orations, plenary lectures, keynote addresses and seminars across the world in his illustrious career. He has been an active consultant to industry with more than 70 assignments and over 70 sponsored research projects for past 30 years. He has been involved in many policy making prestigious committees of central and state governments, UGC, AICTE, NBA, CSIR, DBT, MHRD, NAAC, CII, FICCI, etc. He has provided inspiring leadership to the Institute of Chemical Technology (ICT), the Indian Institute of Chemical Engineers (IICChE), Catalysis Society of India, and Maharashtra Academy of Sciences. As President of IICChE in 2001, he changed the face of IICChE and made it a vibrant body. Under his dynamic leadership, ICT has established two new campuses, ICT Mumbai Indian Oil Odisha Campus Bhubaneswar with complete support of Indian Oil Corporation and partnership of IIT Kharagpur for research and innovation and Marathwada Jalna campus. Both these campuses will have innovative programmes of education and innovation which will create entrepreneurs and are unparalleled example in India and demonstrate Prof Yadav's vision and leadership of academia. ICT has won many awards under his leadership including the University of the Year Award by FICCI (2018). Five documentaries are available on YouTube on his life and vision.

Prof. Yadav was elected to the US National Academy of Engineering: For research, innovation, and education in green chemistry, catalysis, nanotechnology, and chemical engineering leading to clean and green technologies. 1) This is a really big honour and international recognition. This year's list also includes Satya Nadella and Elon Musk along with Professor Yadav. This is second year in succession where ICT has been recognised. Out of 18 such Fellows of NAE, USA who are Indian Nationals, alive today, 5 are from ICT.

Prof. G.D. Yadav has been selected as the National Science Chair (Mode 1) by the Science and Engineering Research Board (SERB) of the DST, Govt of India, for the period of 3 years.

Prof. G. D. Yadav has been conferred the "Prof. Jai Krishna Memorial Award 2021" by the Indian National Academy of Engineering (INAE) for his outstanding contributions in the field of Engineering. The Award will be conferred in the Award Ceremony to be held virtually during the INAE Annual Convention scheduled on December 15-17, 2021.

Subjects Taught: Fundamentals of Green Chemistry and Technology

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology, Ph.D. (Science) in Chemistry

Guided students:

Ph.D.: 97, M. Tech.: 107, Postdoc: 34

Total Research Publications

National: 8, International: 439

h-Index: 64; i-10 index 316,

Citations: 15,000+

Patents:

Total Patent Application Filed: 102;

Total Patents Granted: 62;

(a) Total Indian Filed: 58;

(b) Total Indian Granted: 36;

(c) Total International Filed: 44;

(d) Total International Granted: 26

AWARDS and Recognitions : (Over 125)

- Padmashri (Govt. of India, 2016),
- D.M. Trivedi Life Time Achievement Award by Indian Chemical Council,
- Dr B.P. Godrej Life Time Achievement Award by Indian Institute of Chemical Engineers,
- Professional Award (100 Rotary Clubs),
- Founding Chair, ACS India International Chapter
- President Indian Chemical Society
- President, Maharashtra Academy of Sciences
- Former President, Catalysis Society of India
- Former President, Indian Institute of Chemical Engineers
- Council Member, Indian National Science Academy (2019-)
- Independent Director: Godrej Industries Ltd, Aarti Industries Ltd, Meghmani Organics Ltd, Bhageria Chemicals Ltd, Clean Science & Technology Pvt Ltd.

ADJUNCT FACULTY



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ADJUNCT FACULTY



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ADJUNCT FACULTY



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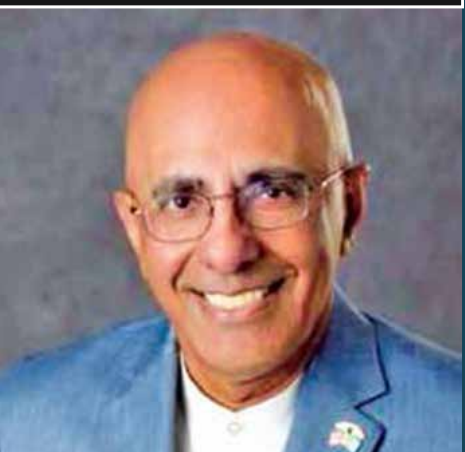
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Shri. DILIP UDAS
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Dr. SESHADRI S. RAMKUMAR

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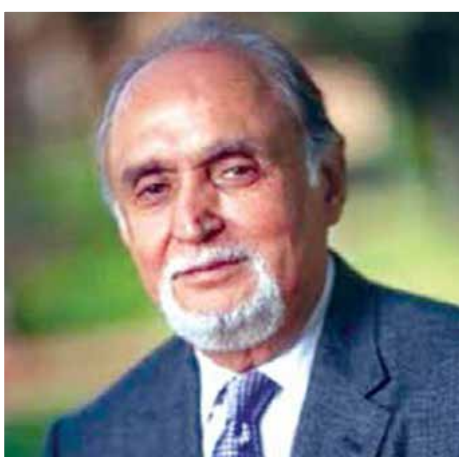
Dr. PRASAD POTLURI

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Gharda Chemicals
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Khar, Mumbai - 400 052.
Mob: - 9820283881



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Ministry of Environment,
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email: Varma.Rajender@epa.gov



PROF. MUKUND V. KARWE

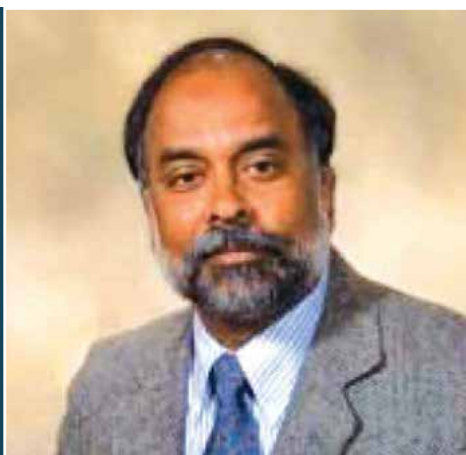
Professor and Chair, Department of Food Science
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ADJUNCT FACULTY



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Professor of Plant Science and
Founding Director of Global Institute
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Agriculture,
Associate Vice President for International
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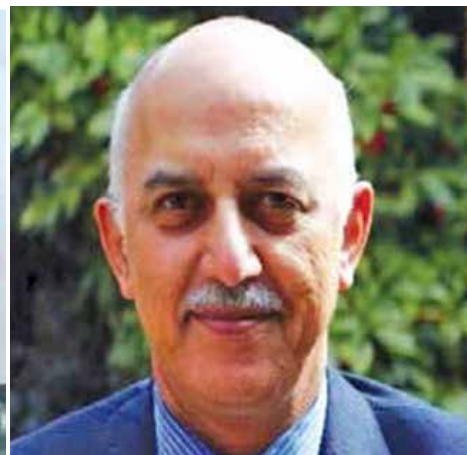
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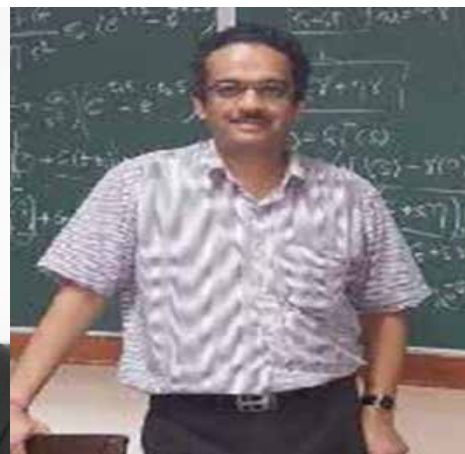
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5. **Prof. Sanjay V. Deshmukh**
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Professor of Life Sciences,
University of Mumbai 98.
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Assistant Director and
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Superannuated Mumbai 63
7. **Dr. Mukund Keshao Gurjar**
Director (R&D) & Chief
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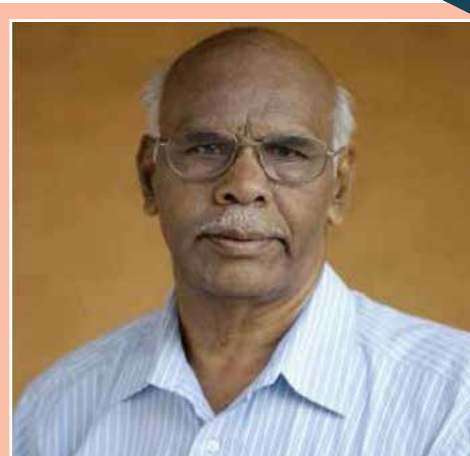
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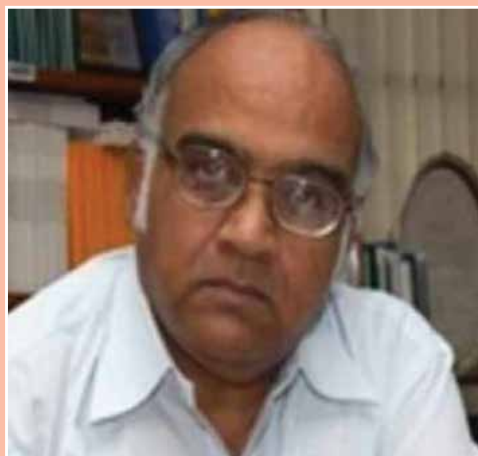
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D.SC. (HONORIS CAUSA)

Third
Convocation,
March 8,
2014



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Professor C.N.R. Rao
National Research
Professor
Linus Pauling Research
Professor & Honorary
President Jawaharlal
Nehru Centre for
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**Professor M.M.
Sharma**
Distinguished
Professor of
Eminence and
Former Director of
ICT
(then UDCT)

Fourth
Convocation,
February 16,
2015



**Professor George
Whitesides**
Harvard University,
USA
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harvard.edu](http://gmwgroup.harvard.edu)



**Shri Mukesh D.
Ambani**
Chairman and
Managing Director
Reliance Industries
Ltd.

Sixth
Convocation,
February 8,
2017



Nobel Laureate
**Professor Jean-Marie
Lehn**
Professor at Collège
de France in Paris
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fr/laboratory-of-
supramolecular-
chemistry-jean-
marie-lehn/](https://isis.unistra.fr/laboratory-of-supramolecular-chemistry-jean-marie-lehn/)



Nobel Laureate
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Grubbs**
Victor and Elizabeth
Atkins Professor of
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Technology, USA
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Seventh
Convocation,
February 23,
2018



Nobel Laureate
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Director-General of CRDS,
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Director of Science Museum, Japan Science Foundation,
RIKEN Fellow, RIKEN University Professor, Nagoya University, Japan
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Ninth
Convocation,
September 2,
2020



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Chairman, Rajiv
Gandhi Science,
and Technology
Commission, Former
Chairman, Atomic
Energy Commission



PADMASHRI
Dr. K.H. Gharda
Chairman and
Managing Director,
M/s. Gharda
Chemicals Ltd.



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PROF. V. K. RATHOD

*B. Tech. (Nagpur, 1999), M. Tech. (Nagpur, 2001),
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Professor of Chemical Engineering*

Head of the Department

Course Co-ordinator, M.Tech. Green Technology





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 Professor of Chemical Engineering

Head, Department of Chemical Engineering

Course Co-ordinator, M.Tech. Green Technology

SUBJECTS TAUGHT:

Heat Transfer, Advance heat transfer, separation processes, Fluid flow and Heat transfer, Multiphase Reactor,

Chemical Reaction Engineering, Material & Energy Balance calculation, pharmaceutical Engineering, Chemical Engineering Laboratory, Unit operations in Biotechnology, Bioreactor Design and Industrial Bioprocess Automation

RESEARCH INTERESTS:

Separation process, Extraction of Natural ingredients, Enzyme catalyzed reactions, Waste Treatment, Catalysis, Separation of biomolecules, Enzyme Preparation, modification and separation, Nanomaterial synthesis
Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green

Technology, Ph.D. (Science) in Chemistry
Guided students: Ph.D.: 34, Masters: 116
 PDF: 12

Total Research Publications-
 National: 01 International: 252+
 Patents: 01 H-Index: 57, Citations: 10125+

NATIONAL AND INTERNATIONAL AWARDS:

Fellow, Maharashtra Academy of Sciences, 2015
 Hindustan Lever Biennial Award for the Most Outstanding Chemical Engineer of the Year Under The Age of 45 Years of Indian Institute of Chemical Engineers, 2018;
 Outstanding Professor Award given by Indian Specialty Chemicals Manufacturing Association, 2019.
 Prof. M M Sharma award for Science and Technology given by Marathi Vidnyan Parishad, Mumbai, 2019
 Best Professor contributing in Research award by C. B. Murarka charitable trust in 2019-20.

PROF. S. S. BHAGWAT

B. Chem. Eng., M.Chem.Eng., Ph.D. (Tech.)

Professor of Chemical Engineering

SUBJECTS TAUGHT:

Chemical Engineering Thermodynamics I, Chemical Engineering Thermodynamics II, Interfacial Science and Engineering.

RESEARCH INTERESTS:

Interfacial Science and Engineering, Microemulsions, Energy and Exergy Engineering, Absorption Cycles, Utilization of lowgrade energy, applications of artificial neural networks

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Ph.D. (Science) in Chemistry

Guided students: Ph.D. 44, Masters: 84

Total Research Publications-
 National: 10, International: 101

Patents: 11 H-Index: 23, Citations: 1976

AWARDS:

- IICChE NOCIL Award for excellence in design or Development of Process Plant or equipment in 2012
- Bry-Air asia award for the HVAC 2013
- INSA Best teacher award, 2016
- UDCT Alumni Association Distinguished Alumnus Award 2019
- Fellow, Maharashtra Academic of Sciences 2007





DR. V. H. DALVI

B.Chem. Eng., M.S., P.D.ENG. (Enschede, The Netherlands), Ph.D.(Austin, USA)

R.A. Mashelkar Assistant Professor.

SUBJECTS TAUGHT: Process Simulation Laboratory, Advanced Mass Transfer, Mathematical Methods in Chemical Engineering, Optimization Methods in Chemical Engineering, Data analysis

RESEARCH INTERESTS : Molecular Simulations, Process Modeling and Simulations, Solar Thermal Systems, Renewable energy

Recognized Research guide for

Ph.D. (Tech) in Chemical Engineering

Total Research Publications- 31

Guided students: Ph.D. : 3 (ongoing:7) Masters: 13 (ongoing:6)

National: Nil, International: 37

Patents: 6 applied 4 granted

PROF. V. G. GAIKAR, F.N.A.E

B.Chem.Eng , M.Chem.Eng., Ph.D. (Tech.)

Bharat Petroleum Distinguished Professor of Chemical Engineering and Former First Vice Chancellor, Dr. Babasaheb Ambedkar Technological University (Maharashtra-ATU)



SUBJECTS TAUGHT: BioReaction Engineering, BioSystem Engineering, Chemical Process Control

RESEARCH INTERESTS: Renewable Energy Resources, CO₂ Reduction to Chemicals, Molecular Simulation, Chemical Process Development and Engineering, Clean Technology, Hydrotropy and Interfacial Sciences, Reactive Separations.

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Green Technology and Ph.D. (Science) in Chemistry, Green Technology

Guided students: Ph.D. 51, Masters: 93

Total Research Publications- National: 04, International: 188

Patents:11, H-Index:34 (Scopus), 39 (Google Scholar)

Citations: 4005 (Scopus), 4703 (Google Scholar)

AWARDS AND HONOURS:

- Fellow, Indian National Academy of Engineering (2008)
- Fellow, Maharashtra Academy of Sciences (2004)
- Eminent Engineer, Institution of Engineers(India) (2019)
- Acharya PC Ray Memorial Lecture, Institution of Engineers (India) (2019)
- UAA Distinguished Alumnus, ICT (2016)
- IChE-D.O.S.T. Dr. S. K. Sharma Medal (2014)
- IChE-CHEMCON Distinguished Speaker Award (2014)
- IChE-Herdillia Award for Excellence in Basic Research in Chemical Engineering (2004)
- Best Teacher Award, University of Mumbai (2002)
- UGC Career Award, (1994)
- Young Scientist Medal, Indian National Science Academy(1992)
- Young Associate, Indian Academy of Sciences (1992)



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Course Co-ordinator, Certificate course on Practice of Chemical
Technology,
Controller of Examinations**

SUBJECTS TAUGHT:

Chemical Reaction Engineering, Cavitation for Green Processes, Process Calculations,

Asian Researcher and Engineer given by The Society of Chemical Engineers, Japan, 2013; Hindustan Lever Biennial Award for the Most Outstanding Chemical Engineer of the Year Under The Age of 45 Years of Indian Institute of Chemical Engineers, 2013; Fellow, Maharashtra Academy of Sciences, 2014; Outstanding Professor Award given by Indian Specialty Chemicals Manufacturing Association, 2015, 2018; Maharashtra State National Award for Best Research work done by teachers of engineering colleges, Indian society for technical education, New Delhi-2016; Prof. M M Sharma award for Science and Technology given by Marathi Vidnyan Parishad, Mumbai, 2017; Most Outstanding Faculty Research Award in the Chemical Engineering Discipline, Careers 360, 2018; Rajib Goyal Prize, 2018; Fellow, Indian National Academy of Engineering, 2019; Invitational Research Fellowship of Japan Society for the Promotion of Science (JSPS), 2020; Fellow, Institution of Chemical Engineers, UK, 2020; UGC Mid Career award by University Grants Commission, New Delhi, 2020; Mention in the Top 2% Scientists in the world in the area of Chemical Engineering (first in India) in analysis by Stanford University, 2020; IChE Anij Reddy Innovator of the year award 2021; Outstanding Professor Award given by Indian Specialty Chemicals Manufacturing Association, 2021

Engineering Applications of Digital Computers,

RESEARCH INTERESTS: Sonochemistry, Hydrodynamic Cavitation, Process Intensification, Water and Wastewater Treatment, Enzymatic Reactions, Polymer Chemistry, Advanced Oxidation Processes

Recognized Research Guide for: Ph.D. (Tech.) in Chemical Engineering, Green Technology, Bioprocess Technology; Masters in Chemical Engineering, Green Technology, Bioprocess Technology

Guided students: Ph.D. 22, Masters: 64

Total Research Publications- National: 17, International: 395

Citations as per Scopus: 22500 H-index : 78

AWARDS:

Anil Kumar Bose Medal of the Indian National Science Academy (INSA), 2011; The SCEJ Award for Outstanding

Dr. SACHIN JADHAV

Ph.D. (Tech.) in Chemical Engineering

ASSISTANT PROFESSOR IN CHEMICAL ENGINEERING

SUBJECTS TAUGHT: Chemical Process Control, Chemical Engineering Operations, Chemical Engineering Laboratory, Research Methodology

RESEARCH INTERESTS: Water and Wastewater Treatment, Membrane-based Separation, Nanomaterials Synthesis and their Applications, Adsorption-based Separation, Waste Valorization, Petrochemicals, Chemical and Enzymatic Kinetics, Process Dynamics and Control, Drying, Crystallization, Sustainability Analysis

Recognized Research Guide for: Chemical Engineering

Guided students: Ph.D.: (ongoing 1); Masters: (6 completed + 2 ongoing)

Total Research Publications-

National: 01, International: 16

Citation : 770+; H-Index: 09





PROF. ANAND VINAYAK PATWARDHAN

Ph.D. (Tech.) Chemical Engineering

Professor of Chemical Engineering

Dean (Academic Programmes)

SUBJECTS TAUGHT:

Transport Phenomena, Chemical Reaction Engineering, Chemical Engineering Operations, Advanced Momentum Transfer, Green Technology, Advanced Membrane Separations, Advanced Mass Transfer

RESEARCH INTERESTS:

Membrane separation (separation/recovery of chemicals/metals from industrial streams; development of ceramic membranes for industrial applications), Green Technology (ionic liquids for solvent extraction/reactions; value-added chemicals from non-edible oils; greener organic chemical process development), Bioprocess Technology (synthesis of chemicals and microbial colorants / pigments), Heterogeneous reactions

Recognized Research Guide for: Ph.D. (Tech.), Chemical Engineering, Ph.D. (Tech.) Bioprocess Technology, Ph.D. (Science) Chemistry, Ph.D. (Green Technology)

Guided students: Ph.D.: 20, Masters: 53

TOTAL RESEARCH PUBLICATIONS : National: 61, International: 80, H-Index: 27; Citations: 3210

PROF. LAKSHMI KANTAM MANNEPALLI

B.sc., MSc., Ph.D (Chemistry)

(FNA, FTWAS, FNASc, FRSC, FMASc)

Dr. B. P. Godrej Distinguished Professor of Green Chemistry and Sustainability Engineering;

(Former Director, CSIR-IICT, Hyderabad)



SUBJECTS TAUGHT:

Nanotechnology, Green chemistry

RESEARCH INTERESTS: Catalysis, Materials and Process Chemistry, Nanotechnology.

Recognized Research Guide for: Chemistry and Chemical Engineering

GUIDED STUDENTS: Ph.D. : 42

TOTAL RESEARCH PUBLICATIONS:

National/ International: 360

Citations : 17878 ; H-Index: 71

Patents : 52

AWARDS:

- 2022- Fellow of Indian National Academy of Engineering, India
- 2019- Goyal Award, Applied Sciences, Kurukshetra University, Kurukshetra
- 2019- ICC -D.M.Trivedi Life time Achievement Award
- 2018-TWAS Fellow, Chemistry and Sustainability Engineering

- 2015-J.C.Bose Fellow (SERB-DST)
- 015- Eminent Scientist Award Catalysis Society of India;
- 2015- Dr.Burjor P. Godrej Distinguished Professor of GreenEngineering
- 2014-Fellow of the Indian National Science Academy; India,
- 2013 Fellow of The Royal Society of Chemistry, UK;
- 2011- Vasvik Award;
- 2011 - Lifetime Achievement Award, Indian Chemical Society;
- 2010 - Platinum Jubilee Lecture Award, ISC-2010;
- 2008 Fellow of National Academy of Sciences, India;
- 2006- Fellow of Andhra Pradesh Academy of Sciences, Hyderabad



DR. KUMUDINEE V. MARATHE
B E and M Tech in Metallurgical Engg
Associate Professor in Metallurgical Engg.

SUBJECTS TAUGHT: Material Science and Engg, Advanced Materials, Ind. Engg Chem.

RESEARCH INTERESTS: Waste water treatment, membrane separation, ground water treatment, membrane bioreactor, electrochemical membrane bioreactor, sustainability assessment, exergy analysis.

Recognized Research Guide for Ph.D in Chemical Engineering and Green Technology

Guided students: Ph.D. 04, Masters: 40

Total Research Publications- National: 48, International: 37

H Index: 17, Total Citations: 1928, Impact factor (Scopus): 39.644

PROFESSOR ANIRUDDHA BHALCHANDRA PANDIT

F.N.A., F.T.W.A.S., F.A.Sc., F.N.A.E., F.N.A.Sc., F.M.A.Sc.

Sir J. C. Bose National Fellow, Gol (2015-2020; 2020-2025)

UGC Research Scientist 'C'

Vice Chancellor

Institute of Chemical Technology



SUBJECTS TAUGHT: (past 2 years) Chemical Project Engineering and Economics, Separations Processes (jointly with Prof. A. V. Patwardhan)

RESEARCH INTERESTS:

Physical and Chemical Processing applications of Cavitation phenomena, Sonochemistry, Study of opportunities in industrial wastewater treatment and its reuse applications, Mixing in Mechanically agitated contactors:

Experimental and CFD Investigations, Design of nozzles for hydrodynamic cavitation: Experimental and CFD Investigations, Modeling of Stoves, Optimization of cooking devices, Pyrolysis of biomass for value-added products, Microbial disinfection using hydrodynamic cavitation, Protein modification, Cell disruption, Selective recovery of intracellular biomolecules at the cell disruption stage.

Recognized Research Guide for:

Ph.D. (Tech.) in Chemical Engineering, Ph.D. (Tech.) in Bioprocess Technology, Ph.D. (Science) in Chemistry, M.Chem. Engg. in Chemical Engineering, M.Tech. in Bioprocess Technology

Guided students: Completed: Ph.D.: 63, Masters: 102, Ongoing: Ph.D.: 10, Masters: 10

Total Research Publications: 448 (Scopus; 19-05-2022)

Citations: 24560 (Scopus; 19-05-2022) H-Index: 84, Patents: Granted: 6, Applications Filed: 24,

Patents: Granted: 4 Applications Filed: 26

AWARDS (SINCE PAST ONE YEAR):

- Secured First Position as Scientist in India in the Engineering and Technology field by Research.com, 2023
- Nominated as a member of the CSIR Society, Government of India, 2023
- Selected as 'Fellow of the United States National Academy of Engineering (US-NAE)' 2023



PROF. B. N. THORAT

B.Chem. Eng, M.Chem. Eng, D.H.S.T., Ph.D. (Tech)

**Senior Professor of Chemical Engineering
(Former Director, ICT - IOC, Bhubaneswar)**

SUBJECTS TAUGHT:

Basic Course in Entrepreneurship & Advanced course in Entrepreneurship, Chemical Engineering Operations, Perspective of Society, Science & Technology,

Separation Processes in Chemical Engineering

RESEARCH INTERESTS :

Drying Technology and Particle Handling, Process Development, Multiphase Reactors, Industrial Crystallization and Filtration, Food Processing, sustainability

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Biotechnology, Ph.D. (Science) in Chemistry.

Guided Students: Ph.D. 36, Masters: 69; PDF:07

Total Research Publications- National: 03, International: 157 (Google Scholar), Patents: 5 granted, H-Index:28, Citations: 2893, i10-index: 62

AWARDS:

- Zayed Sustainability Award, UAE's pioneering global Award, 2021 for startup

- Gunther Oertel Startup Innovation Award for Microbutor Innovation, Covestro, (Former Bayer Material Science, Germany), 2017.
- Millennium Alliance Award by UKAID (DFID) and FICCI: Solar Conduction Dryer Scale-up in Nepal, 2016
- Millennium Alliance Award by UKAID (DFID) and FICCI: CassavaTech scale up in Kenya, 2016
- Lifetime Achievement Award for Outstanding Contribution to Drying and Dehydration, given by atADC-2019.
- NOCIL AWARD for excellence in design of new equipment and process, 2015.
- The VASVIK Award for the year 2012 in the field of Chemical Sciences and Technology, 2015
- Bill and Melinda Gates Foundation Award of USD 100,000 (One Lakh US Dollar) each for Innovative Cassava Dryer, and Solar Grain Dryer 2013
- Dell Social Innovation Award of USD 60,000 for developing "Solar Conduction Dryer" 2013.
- Vocational Excellence Award, for his valuable contribution to Science and Society for making Solar Conduction Dryer for the Agricultural Sector, Rotary Club of Mumbai Cuffe Parade, 2013.



PROF. PRAKASH D. VAIDYA, FMASC, FICS

B. E. (Chem. Engg.), M. Chem. Engg., Ph.D. (Tech.) in Chem. Engg.

Nodal Officer and RCF Professor of Chemical Engineering

SUBJECTS TAUGHT:

Chemical Reaction Engineering, Industrial & Engineering Chemistry, Environmental Engineering

RESEARCH INTERESTS:

Energy transition

(ICCU, H2 Production, Biofuels)

Recognized Research Guide for: Ph.D. (Tech.) in Chem. Engg., Ph.D. (Tech.) in Green Tech., Ph.D. (Sci.) in Chemistry

Guided students: Ph.D. 24, Masters: 48

Total Research Publications - International: 115, H-Index: 33, Citations: 5000, Patents (granted in last 5 years): 03

AWARDS:

- Manmohan Sharma Science & Technology Award (2022)
- SHV Energy Sustainable Fuels Open Innovation Challenge Winner (2022)
- Dr. Naresh J. Suchak Innovation Award (2021)

DR. MANISH YADAV

B. Chem. Eng., M. Chem. Eng., Ph.D. (Tech.) in Chemical Engineering

Assistant Professor of Chemical Engineering

SUBJECTS TAUGHT:

Transport Phenomena, Chemical Engineering Laboratory

RESEARCH INTERESTS:

Chemical Reaction Engineering, Nanotechnology, Crystallization

Recognized Research guide for M.Chem. Engg., PhD (Tech) in Chem. Engg.

TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 18

Citation: 266; H-Index: 10





PROFESSOR ASHWIN W. PATWARDHAN

B.Chem. Engg., M.S. Ph.D. (Tech) in Chemical Engineering

Professor of Chemical Engineering

SUBJECTS TAUGHT: Momentum and Mass Transfer, Advanced Reaction Engineering, Material and Energy Balance Calculations, Advanced Separation Processes

RESEARCH INTERESTS: Computational Fluid Dynamics, Transport Phenomena, Membrane Separation Processes, Liquid Extraction

Guided students:

Recognized Research Guide for Ph. D. (Tech.) as well as Ph. D. (Sci.)

Guided students: Ph.D.26, Masters: 51

Total Research Publications- International: 126 Total Citations = 2300; H-Index = 27

AWARDS:

- Fellow, Maharashtra Academy of Sciences 2012;
- Herdillia Award of I. I. Ch. E. for excellence in Basic Research 2013.
- Prof. M. M. Sharma Science and Technology Award 2016,
- Fellow, Indian National Academy of Engineering, 2019.

DR. PARAG R. NEMADE

B. Chem. Eng., M. S. and Ph.D. (University of Colorado)

Deputy Director, ICT, Marathwada Campus, Jalna, and Associate Professor, Department of Chemical Engineering



SUBJECTS TAUGHT:

Advanced Membrane Separations, Nanotechnology, Advanced Momentum Transfer, CE Lab, Introduction to Chemical Engineering, Materials and Energy Balance Calculations, Chemical Engineering Thermodynamics I, Momentum Transfer

RESEARCH INTERESTS:

My group works on membrane separation processes, on development of new polymeric and graphene-based materials for membranes, catalysts, and sensors applications.

Recognized Research guide for : PhD. (Tech) in Chemical Engineering, Oils, Oleochemicals and Surfactant Technology, Ph.D. (Sci) in Chemistry

Guided students: Ph.D.: 05, Masters: 32 Ongoing PhD: 08, Masters: 02

TOTAL RESEARCH PUBLICATIONS: National: 01, International: 27

Patents applied: 03 Patents granted: 05

H-Index: 15 (Scopus); 16 (Google Scholar),

Citations: 1000 (Scopus); 1205 (Google Scholar)

AWARDS:

- DAE Young Scientist Award, 2013,
- Reinvent the Toilet Challenge 2013 (Bill and Melinda Gates Foundation), Chevening Rolls - Royce science, Innovation and Leadership Fellowship 2016, Newton-Bhabha Fellowship 2017
-

Dr. C.S. MATHAPATI

B.Chem.Engg., M.Chem.Engg., Ph.D (Tech)

Associate Professor of Chemical Engineering, Warden Hostel - 1

SUBJECTS TAUGHT: Multiphase Reactors, Process Simulation Laboratory, Bioreactor Design and Control, Advanced Flow Visualization Techniques.

Computational Fluid Dynamics, Multiphase Flow, Reactor Design, Interface Heat and Mass Transfer

Recognized Research Guide for Ph.D. (Tech) in Chemical Engineering

Guided students: Ph.D, 12; Masters: 23

TOTAL RESEARCH PUBLICATIONS: International: 56





PADMASHRI PROFESSOR GANAPATI D. YADAV

B. Chem. Eng. (Mumbai, 1974). Ph.D. (Tech.) (1980), N.A.E. (US), F.N.A.I. (US), F.T.W.A.S., F.N.A., F.N.A.Sc., FASc, FNAE, Ch.E., F.I.Chem.E. (UK), F.M.A.Sc., F.I.I.Ch.E., F.I.C.S. F.R.S.C. (UK), F.I.S.T.E, F.B.R.S.I.

National Science Chair (SERB/Govt. of India) & Emeritus Professor of Eminence

Former R. T. Mody Distinguished Professor & Former Tata Chemicals Darbari Seth Distinguished Professor of Leadership & Innovation and Former Vice Chancellor

Former Jagdish Chandra Bose National Fellow (DST-GOI)

Adjunct Professor, RMIT University, Australia, University of Saskatchewan, Canada,

Conjoint Professor, University of New Castle, Australia, Distinguished Adjunct Professor, IIT Guwahati, Distinguished Visiting Professor, SOA University, Bhubaneswar

SUBJECTS TAUGHT: Fundamentals of Green Chemistry and Technology

RESEARCH INTERESTS: Green Chemistry and Engineering, Catalysis, Chemical Engineering, Energy Engineering, Biotechnology, Nanotechnology, and Development of Clean and Green Technologies, Net zero goal, green hydrogen production technology, carbon dioxide refineries and valorization of (waste) biomass and waste plastics

Recognized Research guide for Ph.D. (Tech.) in Chemical Engineering, Bioprocess Technology, Food Biotechnology, Pharmaceutical Biotechnology, Green Technology, Ph.D. (Science) in Chemistry

Guided students: Ph.D. 108; Ongoing: 8; Masters: 142; Ongoing: 13; PDF: 48, ongoing 3

Total Research Publications: National: 525, International: 505

Impact Factor per publication: 4.693;

h-Index: 68; i10 Index: 338, Citations: 16700

Patents: 121

NATIONAL AND INTERNATIONAL AWARDS:

- Fellow of Several National and International Organizations,
- Awarded PADMASHRI by the Government of India on 28th March 2016. Only second Indian to be elected as Fellow of US National Academy of Inventors (2022), and one among 21 Indians Elected to the US National Academy of Engineering



PADMASHRI PROFESSOR GANAPATI D. YADAV

B.Chem.Eng. (Mumbai, 1971), M.Chem.Eng. (Mumbai, 1972), Ph.D. (Tech.) (Mumbai, 1977), FNA, FTWAS, FASc, FNAE, FMASc,

Foreign Member US National Academic of Engineering

**Distinguished Emeritus Professor, Homi Bhabha National Institute;
Emeritus Professor of Eminence Institute of Chemical Technology.**

SUBJECTS TAUGHT: Fluid Mechanics, Multiphase Reactor Design

RESEARCH INTERESTS: Fluid Mechanics, Multiphase Reactor Design, Computational Fluid Dynamics, Atomic Energy, Solar Energy, Bio-Energy

Recognized Research Guide for: Ph.D. (Tech.) in Chemical Engineering, Nuclear Engineering, Ph.D. (Science)

Guided students: Ph.D. 91, Masters: 60

Post-Doctoral: 25

Total Research Publications - National: 40, International: 628, Current

Students: PhD: 10, Masters: Nil, Post-Doctoral: 4, Citations: 26,547

(according to Google Scholar), H-index: 80 (according to Scopus)

NATIONAL AND INTERNATIONAL AWARDS:

- Padma Bhushan (Govt. of India, 2014), Shantiswarup Bhatnagar Prize (Engineering Sciences, 1991),
- Eminent Engineer Award (Engineering counsel of India, 2018),
- Emeritus Professor of Eminence (Institute of Chemical Technology, 2019).



Department of SPECIALITY CHEMICALS TECHNOLOGY



PROF. N. SEKAR

*B.Sc (Hon), B.Sc (Tech), Ph.D (Tech),
B. A. (Music), M.A. (German). M.Music*

Professor of Tinctorial Chemistry

Head of the Department



PROF. N. SEKAR

*B.Sc (Hon), B.Sc (Tech), Ph.D (Tech),
B. A. (Music), M.A. (German). M.Music*

Professor of Tinctorial Chemistry

SUBJECTS TAUGHT:

Ph. D. / M. Tech. (Course Work): Fluorescent Colorants in Bio-imaging, Chemistry and Technology of Agrochemicals, Chemistry and Technology of High Performance Pigments Chemistry and Technology of Functional Dyes, Proton Transfer Reaction. B. Tech.: Mechanisms of Organic Reactions, Chemistry of Substrates, Color Chemistry: an Introduction, Chemistry of Heterocyclic Compounds, Chemistry and Technology of Direct, Acid, and Sulphur Dyes, Analytical Instruments in Colorant Industry.

RESEARCH INTERESTS:

Computational Colour chemistry (DFT and TD-DFT computations), greener synthesis of multistep heterocyclic and fused heterocyclic compounds, process development of intermediates, fluorescent colorants for bio-sensors, security applications, molecular imprinting, synthesis of perfumery and flavor compounds, laser colorants, NIR absorbing, fluorescing and reflecting colorants, tinctorially strong photostable disperse dyes, colorants for DSSCs.

Recognized Research guide for Ph.D. (Tech.) in Speciality Chemical Technology, Green

Technology, Ph. D. (Science) in Chemistry, Ph.D in Textile Chemistry

Guided students: Ph.D. 42, Masters: 24

TOTAL RESEARCH PUBLICATIONS : National : 16 International: 324

Cumulative impact factor: 205, **H-Index:** 29, **Citations:** 3873

Patents (granted in last 5 years): 07

AWARDS:

- Fellow of Society of Dyers and Colourists, (UK)
- Fellow of Indian Chemical Society
- Fellow of Maharashtra Academy of Sciences

PROF. GANAPATI SUBRAY SHANKARLING

B. Sc. (Hon), B. Sc. (Tech), M. Sc. (Tech), Ph.D. (Tech.)

**Professor of Speciality Chemical Technology,
Co-ordinator, Perfumery and Flavor Technology**

SUBJECTS TAUGHT:

Chemistry and technology of benzene intermediates I and II, Chemistry and technology of specialty organic intermediates and fine chemicals, Chemistry and technology of dyes and pigments, Chemistry of functional dyes, Introduction to green chemistry, Analysis of intermediates, dyes and fibres, Tinctorial chemistry lab, Experimental dyeing; Chemistry of functional colorants, Chemistry and technology of agro chemicals, Analysis and development of green industrial processes, Chemistry of perfumes and flavors

RESEARCH INTERESTS:

Green Chemistry and Technology (Homogeneous catalysts, green solvents and alternative cost effective energy sources like concentrated solar radiation and cavitation technology) Oxidation Chemistry, Functional colorants: Thermo and Photochromic, Metal sensors, Chemosensor for anions, Cucurbiturils chemistry, Process developments in Intermediates, dyes and specialty chemicals.

Recognized Research Guide for Ph.D. (Tech) in Speciality Chemical Technology, Green Technology, Perfumery and Flavours; Ph.D. (Sci) in Chemistry and Biotechnology

Guided students: Ph.D.20, Masters: 30

TOTAL RESEARCH PUBLICATIONS:

National: 20, International: 147

H-Index: 25, Citation : 2565

Patents (granted in last 5 years) : 20





Dr. SURAJIT SOME
Ph.D (IIT-Kharagpur)
UGC-FRP Assistant Professor

of benzene intermediate-I, Experimental Dyeing, Preparation of Intermediates, Preparation of Dyes, Statistical Design of Experiments, Analysis of Intermediates and Dyes and Fibers.

RESEARCH INTERESTS: Design and Synthesis of graphene derivatives and their applications; Flame retardants, Energy storage materials, Bio-probes, Waste stream treatment, Advanced catalysts, Semiconductor materials, Anticancer materials, Sensors and Surfactants.

Recognized Research Guide for Ph.D. (Sci) in Chemistry

Guided students: Ph.D.: 3 (Ongoing: 04), Masters: 01 (Ongoing: 04), Postdoc: 04
Total Research Publications- International: 52

Cumulative impact factor: 250.92 (5.018 per publication), **H-Index:** 23, **Citation:** 1955 (37.6 per publication), **Patents (granted in last 5 years):** 19

AWARDS:

- Research Professor Award 2020 from POSTECH, South Korea.
- Research Professor Award 2020 from GIST, South Korea.
- Research Fellow Award 2013 from National Research Foundation (NRF), South Korea.
- Best Researcher Award 2012, Sungkyunkwan University, South Korea.
- Fellowship of Creative Research Initiative (CRI) 2011, South Korea.
- Fellowship of National Research Foundation (NRF) 2009, South Korea.
- Fellowship of Postdoctoral Research Program of Sungkyunkwan University 2009, South Korea.
- Dr. D. S. Kothari Fellowship Award 2008.
- Qualified GRADUATE APTITUDE TEST IN ENGINEERING – 2004, with all India Rank 204.
- Qualified CSIR- NET for UGC fellowship and Lecturership in Chemical Sciences, Council of Scientific and Industrial Research, New Delhi, held in June 2003.

SUBJECTS TAUGHT:

M.Tech Course: Mechanism of Organic Reactions, Specialty Chemicals Chemistry and Technology, Organic Materials for Electronics. B.Tech Course: Chemistry of Heterocycles, Color Chemistry – An Introduction, Use of Analytical Instrument in Synthetic Organic Chemistry, Chemistry of Agrochemicals, Mechanism of Organic Reactions, Chemistry and Technology

Dr. SATYAJIT SAHA
Ph.D. (Chemistry)

UGC-Assistant Professor

SUBJECTS TAUGHT:

Crop Protecting Chemicals, Advances in Colorants, Introduction to Green Chemistry, Analytical Chemistry and Quality Control Techniques, Azo colorants, Heterocyclic intermediates in colorants, Reaction Mechanism and Reagent Chemistry, Chromatographic Techniques and Preparation of dyes and intermediates, Analysis of inorganic raw materials used in Speciality Chemical industry, Chemistry and Technology of Pigments, Preparation, analysis of dyes, intermediates, optical brighteners and functional colorants, Chemistry and Technology of Benzene Intermediates-I and II, Experimental Dyeing

RESEARCH INTERESTS:

Organocatalytic transformations to synthesize bioactive molecules and molecules of industrial relevance, Enantioselective organocatalytic transformations, Molecular engineering via supramolecular non-covalent interactions to design AIE-active molecules for applications

in sensing, imaging, and optoelectronics, Development of covalent organic polymers (COPs) for environmental remediation, gas storage, sensing, and catalysis, Diversity oriented synthesis of annelated N-heterocycles, Synthesis of organic sensitizers for Dye Sensitized Solar Cell applications and luminescent molecules for Organic Light Emitting Diodes, etc, Green chemistry and implementation of sustainable technologies in the synthesis of specialty molecules, Synthesis and development of novel molecules for fragrance and flavor industry.

Recognized Research Guide for: Science (Chemistry)

Guided students: Ph.D. : 1, Masters : 2

TOTAL RESEARCH PUBLICATIONS: International: 25,

H-Index: 12; Citations data: 801

AWARDS:

- Fellow of the Indian Chemical



Society-2020

- Life Member of Chemical Research Society of India (CRSI)-2020
- Editorial Board Member of Current Organocatalysis, Bentham Science (2020-2022)
- Research Excellence Award from Indian Chemical Society-2020
- ACS Journal award-2020
- SERB Young Scientist Research grant- 2015
- FWO Visiting Postdoctoral Fellowship from Belgium, 2011



Dr. NABANITA SADHUKHAN

Ph.D.

UGC-FRP Assistant Professor

SUBJECTS TAUGHT:

- Technology of Intermediates - I
- Technology of Intermediates - II
- Chemistry of Functional Dyes
- Analysis of Inorganic Raw Materials used in Speciality Chemical Industries
- Fluorescent Colorants
- Chromatography Techniques and Preparation of Intermediates and dyes.

RESEARCH INTERESTS:

Synthesis functional amphiphilic based on monodisperse polyethylene glycols and their application in biology, Biological important functional colorants, Coordination chemistry, Synthesis of organometallic molecules for functional application like OLED, Synthesis of molecular motor based fluorescent dyes for biological application namely suppression of protein aggregation and protein folding, Low molecular weight Poly Ethylene Glycols based gel for functional application and exploiting underlying supra-molecular interaction for the gelation.

Recognized Research Guide for: Science (Chemistry)

Guided students: Master : 02

TOTAL RESEARCH PUBLICATIONS- National : 02
International: 15, H-Index: 10; Citations : 314

AWARDS:

DST -Young Scientist Start-Up Research Grant, 2014.

DR. SUBRAHMANYAM V. GARIMELLA

B. Sc., B. Tech, MS., PhD (Engineering)

UGC-Assistant Professor

SUBJECTS TAUGHT:

Formulations in Fine Chemicals Industry (currently teaching), Materials Chemistry, Advanced Applications of Nanotechnology, Composites and Nanocomposites, Non-Ferrous Materials Technology, Introduction to Nanotechnology, Advanced Materials Technology, Materials Science, Micro and Nano Material Characterization, Engineering Materials

RESEARCH INTERESTS:

Matter Under Extreme Conditions of Pressure, Temperature and other fields; Synchrotron Sciences and Engineering; Materials Sciences and Chemical Technology

Recognized Research Guide for: Sciences & Engineering

Guided students: PhD (01)

Master : Nil

TOTAL RESEARCH PUBLICATIONS : National : Nil

International: 11

H-Index: 5 Citations: 117







Department of
**FIBRES &
TEXTILE
PROCESSING
TECHNOLOGY**



PROF. RAVINDRA D. KALE

Ph.D. (Tech.)

Professor of Textiles Chemistry

Head of the Department

PROF. RAVINDRA D. KALE

B.Sc., B.Sc. (Tech.), M. Sc. (Tech.), Ph.D. (Tech)

Professor of Textiles Chemistry

Head of the Department



SUBJECTS TAUGHT:

Technology of Textile Polymers, Polymer Chemistry, Testing and Analysis of Fibres, Testing of Textile Materials, High tech and Industrial Fibres, Technology of non-wovens, Dyeing of Natural and Synthetic fibres, Lab Testing of Textiles and Garments, Fastness Lab

RESEARCH INTERESTS:

Effluent treatment using nanoparticles, Application of nano emulsions in Textiles, Synthesis and application of nanoparticles, Use of Polyelectrolytes Multilayers for imparting Novel Properties to Textile Polymers, Green Composites Self Reinforced Composites, Biodegradable packaging films and foams, Functional Finishes for Natural and Synthetic Fibres, Processing of Polyester fibres at room temperature, Modification of Synthetic Fibres by Melt Spinning, Hydrophilic polyester using natural biopolymers, Green Synthesis of nanoparticles, Effluent treatment using natural materials, Electrospinning, **Recognized Research Guide for Ph.D (Tech.) Fibres and Textile Processing Technology, Ph.D (Sci.) Textile Chemistry.**

Guided students: Ph.D.: 6, Masters: 37

TOTAL RESEARCH PUBLICATIONS: 75

National: 08 International: 66

H-Index: 1 Citations: 497, ilo-index-24

Patents (Filed in last 5 years): 3 Granted (1), 02(Filled)



PROF. (Dr.) RAVINDRA V. ADIVAREKAR

B.Sc., B.Sc. (Tech.), M. Sc. (Tech.), Ph.D. (Tech)

Professor in Fibres Chemistry and

Dean HRD

SUBJECTS TAUGHT:

Technology of Textile Dyeing, Technology of Fibres, Technology of Textile Dyeing, Technology of Textile Printing, Experimental Dyeing (Lab), Evaluation of dyes and speciality chemicals, Theory of Textile Coloration, Experiments in Printing, Chemistry of Natural Fibers, Dyeing of Natural Fibers, Dyeing of Man-made Fibers, Printing of Textiles, Printing (Lab)

RESEARCH INTERESTS:

Natural Dyes and Mordants; Fibre Modification; Regeneration of protein and its applications; Respiratory filtration; Extraction of lignin and its applications; Nanocellulose; Superabsorbent; Dyeing and Printing of Textile; Mass Production and extraction of Microbial Enzymes and Colourants for Textile Processing; Medical Textile; Colour fastness of Textile Materials; Detergency of Textiles, Ionic liquids, and Dendrimers for Textiles, Flame Retardancy of Textile, Graphene Nanotechnology, etc. **Recognized Research Guide for Ph.D (Tech.) Fibres and Textile Processing Technology, Ph.D (Sci.) Biotechnology, Ph.D (Sci.) Textile Chemistry.**

Guided students: Ph.D. : 23, Masters: 55

TOTAL RESEARCH PUBLICATIONS: 224

National: 102 **International:** 74, **H-Index:** 20 **Citations :** 1212,

Patents: 01 (Granted), 02 (filed) ilo Index =41



Dr. KEDAR S. KULKARNI
*B.Sc. (Chemistry), B.Sc. (Tech.),
M. Sc. (Tech.), Ph. D. (Tech)*
Assistant Professor

SUBJECTS TAUGHT:

Textile wet processing machinery, Continuous processing of textiles Technology of pre-treatments, Garment Processing, Evaluation of performance textile.

RESEARCH INTERESTS:

Textile colouration, Finishing, Green Processing of Textiles, Natural dyes for textiles, Development of Textile wet processing machinery.

TOTAL RESEARCH PUBLICATIONS:

National :04 International : 10
h-Index: 03; Citations: 127

PROF. (Dr.) ASHOK R ATHALYE
B.Sc., B.Sc. (Tech.), M. Sc. (Tech.), Ph. D. (Tech)
Professor in Textile Chemistry
**VP - Technological Association and
Dean – Student Affairs**

Subjects Taught:

Technology of Finishing, Sustainable textile processing, Theory of Textile Colouration, Wet Processing of Textiles, Laboratory Management Systems, Advanced Textile Processing, Finishing and Evaluation of Textiles, Advanced Textile Materials Environmental Aspects in Textile Processing

Research interests:

Sustainable textile processing, Automotive Textiles, Recycling and Upcycling of Textile Waste Material, Agro Textile, Reducing Water Caron Footprint.

TOTAL RESEARCH PUBLICATIONS: 110

National: 75 International: 35
h-Index: 16; i10 index: 14,
Citations: 426





Dr. SANDEEP MORE
B.Sc., M.Sc. (Organic Chemistry), Ph.D.
Assistant Professor

SUBJECTS TAUGHT:

Chemistry and Applications of Textile Auxiliaries, Smart Textile, Chemistry of Colorants and its Applications, Environmental Aspects and Advances in Textile Processing, Chemistry of Textile Auxiliaries, Green Chemistry in Textile, Advanced Textile Characterization Techniques, Synthesis and Analysis of Dyes and Intermediates, Testing and Applications of Auxiliaries, Evaluation of Dyes and Specialty Chemicals.

RESEARCH INTERESTS:

Molecular Machines, Singlet Fission, Organic Electronics, Smart Textile, Novel Auxiliaries

Recognized Research Guide for Ph.D. (Sci.) Chemistry.

Guided students: Ph.D.: 0, Masters: 29

TOTAL RESEARCH PUBLICATIONS: 18

National : 2, International : 20

H-Index : 11, Citations : 479

AWARDS:

DST INSPIRE Faculty Award

Early Career Research Award

DR. SANTOSH SHIVAJI BIRANJE
B.Text., M.Tech., Ph.D. (Tech)
Assistant Professor



SUBJECTS TAUGHT

Pretreatment, Technology of Textile Polymer, Technical Textiles, Advanced Textile Materials, Research Methodology, Advanced Textile Characterization (LAB), Dyeing of Natural Fibres (LAB), Dyeing of Manmade Fibres (LAB), Techniques Experiments in Printing (LAB)

RESEARCH INTERESTS:

Sustainable textile wet processing, Fibre Science, Extraction and modification of biopolymers, Electrospinning of biopolymers, Biocomposites (thin films, hydrogels, and aerogels) based on nanocellulose and polysaccharides for potential tissue engineering and wound healing, 3D Printing.

TOTAL RESEARCH PUBLICATIONS: 20

National: 03 International: 17

Conference Proceedings: 01 Book chapters: 02

Citations: 277 h-index: 09, i10-index: 09

DR. SAPTARSHI MAITI

B.Tech, M.Tech., Ph.D. (Tech)

Assistant Professor

SUBJECTS TAUGHT

Technology of Yarn & Fabric Manufacturing, Testing of Textile Materials, Technology of Finishing, Analysis of Textile Chemicals and Fibres (LAB), Finishing & Evaluation of Textiles (LAB), Wet Processing of Textiles (LAB), Evaluation of Dyes & Speciality Chemicals (LAB).





Department of FOOD ENGINEERING AND TECHNOLOGY



PROF. REKHA S. SINGHAL

Ph.D (Tech) (Food Technology)

Professor of Food Technology

Head of the Department





PROF. REKHA S. SINGHAL
Ph.D. (Tech) (Food Technology)
Professor of Food Technology
Head of the Department

SUBJECTS TAUGHT:

Food Additives and Ingredients, Principles of Food Analysis, Technology of Dairy, Animal and Plantation Products, Comprehensive Techniques in Food Analysis, Food Safety and Toxicology

RESEARCH INTERESTS:

Food Science and Technology, Carbohydrate Chemistry and Technology, Fermentative Production and Downstream Processing of Biomolecules, Supercritical Carbon Dioxide Extraction of Biomolecules, Food Biotechnology

Recognized Research Guide for Ph.D (Tech) (Food Engineering and Technology), Ph.D (Tech) (Food Biotechnology), Ph.D (Tech) (Bioprocess Technology), Ph.D (Biotechnology), Ph.D (Food Science)

Guided students: Ph.D. 42, Masters: 110

TOTAL RESEARCH PUBLICATIONS:

National: 44, **International:** 385+

H-index as per scopus/google scholar: 59/75;

Citations as per scopus/google scholar: 15,649/24,569

AWARDS:

- Young Scientist Award, Association of Food Scientists and Technologists (I), Mysore, for the year 1995;
- Fellowship, Maharashtra Academy of Sciences for significant contributions to Engineering Sciences and Technology for the year 2007;
- Fellowship, Association of Food Scientists and Technologists (I), Mysore, for the year 2009.
- Fellowship, Biotech Research Society of India, for the year 2011;
- Malaviya Memorial Award (senior faculty), Biotech Research Society of India, for the year 2011;
- C. G. Memorial Award, XVIII Carbo Conference, Forest Research Institute, Dehradun, December 20, 2014;
- ISCMA Award for the year 2013-2014 instituted for 'Outstanding Professor', September 2, 2014;
- Prof. Man Mohan Sharma Award for the year 2015, 2016.
- Recipient of the Best Teacher Award (Professor D.V. Rege–AFST Mumbai Chapter–2011 Endowment) 2016-17, 2018-19 and 2020-21
- Fellow (FIBA) award of the International Bioprocessing Association- An International Forum on Industrial Bioprocesses, for the block years 2017-2018, conferred on May 2, 2019.
- Fellow, Indian National Science Academy, 2022
- Distinguished Alumnus Award, UDCT Alumni Association, 2021.



PROF. UDAY S. ANNAPURE
B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)
Professor of Food Chemistry
Director, ICT - MARJ (on deputation)

SUBJECTS TAUGHT:

Food Chemistry, Technology of Fruits, Vegetables and Tubers, Principles of Food Preservation.

RESEARCH INTERESTS:

Extrusion Processing, Non-thermal processing of food-Cold Plasma Processing, Carbohydrate Chemistry and Technology - Plant Gums, Traditional Foods, Nutraceuticals, Fermentative production and downstream processing of industrially important secondary metabolites.
Recognized Research Guide for: Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science, Biotechnology

Guided students: Ph.D: 18, Masters: 83

TOTAL RESEARCH PUBLICATIONS:

National: 10, International: 161, Patents: 2
H-Index: 33 (Scopus); 37 (Google Scholar),
Citations: 3685 (Scopus); 5067 (Google Scholar)

AWARDS:

Sri Somalal Vyas – SEA Innovation Award (2022)
Recipient of “UGC-BSR Mid-Career Award Grant” (2021)
Fellow of Maharashtra Academy of Science (2017)
BOYSCAST Fellow (DST Govt. of India) – 2010
Recipient of the Best Teacher Award (Professor D.V. Rege–AFST Mumbai Chapter–2011 Endowment) 2014 and 2016.



Dr. SHALINI S. ARYA

B. Tech, M. Tech., PhD (Food Engineering and Technology)

Associate Professor of Food Technology

SUBJECTS TAUGHT :

Chemistry of Food Constituents, Nutrition, Advances in Nutrition, Waste utilisation, Technology of Cereals, Legumes, Pulses and Oilseeds, Technology of Plantation Crops, Technology of Fruits and Vegetables and Tubers, Basics of Food Science and Technology, Biotechnology of fermented foods, Technical Analysis I and II(P), Food Microbiology (P), Food Chemistry (P), Food Analysis (P), Food Processing I and II (P)

RESEARCH INTERESTS :

Cavitation for food processing and preservation, vegan meat alternatives, vegan dairy alternatives, plant based nutraceuticals, bioactives, novel green extraction techniques, Indian Traditional Foods, Chemistry and Preservation of Foods, Product Development and Processing, Staling Studies in Cereal and Cereal products, Starch Chemistry and Technology, Preservation of Foods, Indian Flat Breads, application of newer technologies in preservation of traditional foods, Food Biotechnology, production and Downstream Processing of Biomolecules, Fermented Foods, Diabetic Foods, Functional Foods, Nutraceuticals, Fruit and Vegetable Preservation and Processing, Recognized Research guide for Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science, biotechnology.

Guided students: PhD: Awarded: 6, Ongoing – 4 ; Masters: 50

Total Research Publications:

National: 14,

International: 100

H-index as per Scopus/google scholar- 28/22;

Citations as per Scopus/google scholar: 1662/2703

AWARDS:

- Executive committee, GYA (2022-23); (2020-21)
- Member, Global Young Academy, (2018- 2024)
- Member, Indian National Young Academy (INAYAS), INSA
- Member, Task Force, Mission Millet, Ministry of Family welfare and health (2023-24)
- TWAS-Focal person, TWAS, Italy (2023-24)
- Member, OWSD, Italy
- CNPq-TWAS post Doctoral Fellowship (2019)
- Young Scientist award, AFST, India (2017)
- Best paper award, Elsevier Florida (2017)
- Malaspina international scholar award, ILSI, USA (2016)
- Innovative Research Idea award, CAS TWAS, China (2014)
- Young Scientist Award, Starch Update, 2007

DR. SNEHASIS CHAKRABORTY

B. Sc., B. Tech., M. Tech., Ph.D.

Assistant Professor of Food Technology

SUBJECTS TAUGHT:

Introduction to Food Systems, Principles of Food Preservation, Food Engineering, Food Process Engineering, Advances in Food Technology, Advances in Food Engineering, Experimental Design and Optimization in Food Processing

RESEARCH INTERESTS:

Food Process Engineering, Non-thermal processing of food, Kinetics modeling, Shelf-life extension, Sensory analysis, Process optimization and Product development

Recognized Research Guide for: Ph.D. (Tech) and M.Tech. in Food Engineering and Technology, Food Biotechnology.

Guided students: Ph.D: 1 (awarded)+ 8 (ongoing), Masters: 14

TOTAL RESEARCH PUBLICATIONS:

National: 01, International: 64, h-Index: 19, Citations: 1229

AWARDS:

AFSTI Young Scientist Award 2021

Best PhD thesis in Agricultural Engineering by ICAR, 2017.

DAAD Fellowship under Re-invitation program of former

DAAD scholarship holders 2018;

Recipient of the Best Teacher Award (Professor D.V. Rege–AFST

Mumbai Chapter–2011 Endowment) 2017-18 and 2019-20.



DR JYOTI SONTAKKE- GOKHALE

UGC Assistant Professor

Programme Coordinator, M. Tech. in Food Biotechnology

SUBJECTS TAUGHT:

Nutrition; Waste Management in Food Processing; Food Biotechnology; Design and Analysis of Experiments; Biotechnology of Fermented Foods; Bioprocess Engineering and Technology; Nutraceuticals and Functional Foods; Enzymes in Food and Feed Industry; Technical Analysis Lab; Biochemistry lab; Microbiology Lab; Food Analysis Lab II; Food Biotechnology Lab

RESEARCH INTERESTS:

Enzymes in Food Processing; Biocatalysis; Extraction; Waste management; Fermentation Technology; Green Technology; Nutraceuticals and functional foods; Plant-based foods

Recognized Research Guide for Ph.D. (Tech.) in Bioprocess Technology and Food Biotechnology; Ph.D. (Sci.) in Biotechnology

Guided students: Ph.D.: 4 (ongoing), Masters: 15 (Completed) and 8 (ongoing)

Total Research Publications:

International: 15 Book chapters 7

H-Index: 9; Citations: 223



Department of
**OILS,
OLEOCHEMICALS
AND
SURFACTANTS
TECHNOLOGY**



PROF. A. P. PRATAP

B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)

Professor of Oils, Fats and Waxes
Technology

Head of the Department



PROF. A. P. PRATAP
B.Sc. (Tech), M.Sc. (Tech), Ph.D. (Tech.)
Professor of Oils, Fats and Waxes Technology
Head of the Department

SUBJECTS TAUGHT:

Technology of Oil and Fat Production and Edible Oil Processing, Processing of Oils, Fats and Waxes, Processing of Oleochemicals and Cosmetics, Processing of Soaps, Surfactants and Detergents and Triboapplications laboratory, Functional Fluids and Performance Chemicals, Byproducts Utilization and Waste Management

RESEARCH INTERESTS:

Tribo applications of oils and fats, Surfactants, Additives & specialty products, structural modifications of oils, fats and fatty acids, microbial Biosurfactants

Recognized Research guide for Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Technology, Ph. D. Tech. in Green Technology, Ph. D. (Science) in Chemistry, Ph. D. (Tech.) in Bioprocess Technology, Ph. D. (Science) in Biotechnology

Guided students: Ph.D.: 17, Masters: 86;
Ongoing students: Ph. D. 14, Masters 12

Total Research Publications: 96

National: 18; International: 78, H-Index: 16, Citations: 768
Patent : 01

PROFESSOR (DR.) R. D. KULKARNI
B.Sc.(Tech), M.Tech., Ph.D. (Tech.)
Professor of Oil Technology
Vice Chancellor, Mumbai University

SUBJECTS TAUGHT:

Surface Active Agents, Production and Applications of Surfactants, Soaps and Detergents, Chemistry of Oleochemicals and Surfactants, Chemistry of Oils and Fatty Acids

RESEARCH INTERESTS:

Green Surfactants, Surfactant mediated synthesis and Microheterogeneous Systems, Chemical Modification of Lipids, Biolubricants, Lipid Excipients, Utilisation of Vegetable Oil Refinery Byproducts, Nanopigments and Polymer Nanocomposites, UV cure Multifunctional Monomers and Polymers, High Performance and Functional Coating Systems, Reaction Engineering and Nanocatalysis

Recognized Research Guide for Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Tech., Ph. D. (Sci.) in Chemistry

Guided students (completed): Ph.D.: 15, Masters: 60

Ongoing students: Ph.D.: 07, Masters: 06

Total Research Publications : 77

National: 20, International: 57

Google Scholar: (H-Index 19, Citations: 1,325, I10 Index: 32

Scopus: (H-Index 16, Citations: 800, I10 Index: 22

Patents (granted): 3

Books and monographs: 07 (International: 04 ; National: 03)





PROFESSOR (DR.) J. S. WAGHMARE
B.Sc. (Tech), M.Sc.(Tech), Ph. D. (Tech.)
Professor of Oils, Fats, and Waxes Technology

SUBJECTS TAUGHT:

Analysis of oleochemicals and surfactants, Analysis of oils, fats and waxes, Technology of edible fat production, Evaluation and testing of soaps and detergents, Analysis of raw materials of Oils, Science and Technology of essential Oils, Advances in Technology of Oils and Fats Production, Nutraceuticals.

RESEARCH INTERESTS:

Nutraceuticals, oxidation studies, structural lipids, designer lipids. application of surfactant, Cosmetics, perfume, flavor and fragrances, enzymology.

Recognized Research guide for Ph.D. (Tech.) in Oils, Oleochemicals and Surfactants Technology

Guided students: Ph. D 4 (completed) 2 (ongoing), Masters: 45

Total Research Publications-

National: 05, International: 85

Patents : 02

Dr. CHANDU S. MADANKAR

M. Tech, Ph.D.

**J.G. Kane Assistant Professor in Oils,
Oleochemicals and Surfactants Technology**

SUBJECTS TAUGHT:

Chemistry and Technology of Castor and Nonconventional Oils; Technology of Oleochemicals; Chemistry of Oils, Lipids, Essential oils and their applications; Cosmetics Science; Microbiology and Biochemistry Lab; Technology and Science of Essential Oils.

RESEARCH INTERESTS:

Processing of Oleochemicals, Biolubricants, Enzymatic applications, Supercritical fluids processing, Essential Oils, Cosmeceuticals, Bio-Surfactants, Green catalysis.

Recognized Research Guide for: PhD (Tech) in Oils, Oleochemicals and Surfactants Technology

Guided students: PhD 01; Masters 16

Ongoing students: PhD 01; Masters 10

Total Research Publications: 23

National:, 03, International: 20

Citations-415, H Index- 7

AWARDS:

1.S.R. Bhatnagar Memorial Research award, 2013 by the Oil Technologist Association of India

2. Canadian Commonwealth Scholarship by the Canadian Bureau for International Education (CBIE) on behalf of Foreign Affairs and International Trade Canada (DFAIT) in Department of Chemical Engineering, University of Saskatchewan, 2011-12.





Dr. PINTU K. KUNDU

B.Sc. (Science), M.Sc. (Science), Ph.D. (Science)

UGC -FRP Assistant Professor

SUBJECTS TAUGHT:

Chemistry of Oils and Fatty Acids; Supramolecular Chemistry of Nanomaterials; Chemistry of Perfumery Chemicals; Structural Elucidations by Advanced Spectroscopy; Technology of Perfumery Chemicals.

RESEARCH INTERESTS:

Azobenzene- and spiropyran-based functional molecules, materials and gels; Organic molecular switches; Organic photochromism and acidochromism; Photoswitchable catalysis; Synthetic organic chemistry; Nano-structured materials; Dynamic materials, etc.

Recognized Research Guide for: Ph. D. (Science) in Chemistry

Guided students: Ph. D: 3 (ongoing),

Masters: 6 (ongoing). B . Tech: 2 (ongoing)

TOTAL RESEARCH PUBLICATIONS:

International: 17, H-Index: 11; Citations: 1011

RESEARCH PROJECTS (GOVT. AND PRIVATE INDUSTRY SPONSORED) AND AWARDS:

Core Research Grant (CRG) by Science and Engineering

Research Board (SERB) (status - ongoing)

Early Career Research Award (ECRA) by Science and Engineering

Research Board (SERB) (status - completed)

Personal Website: <https://sites.google.com/site/kundupintu09122014/home>



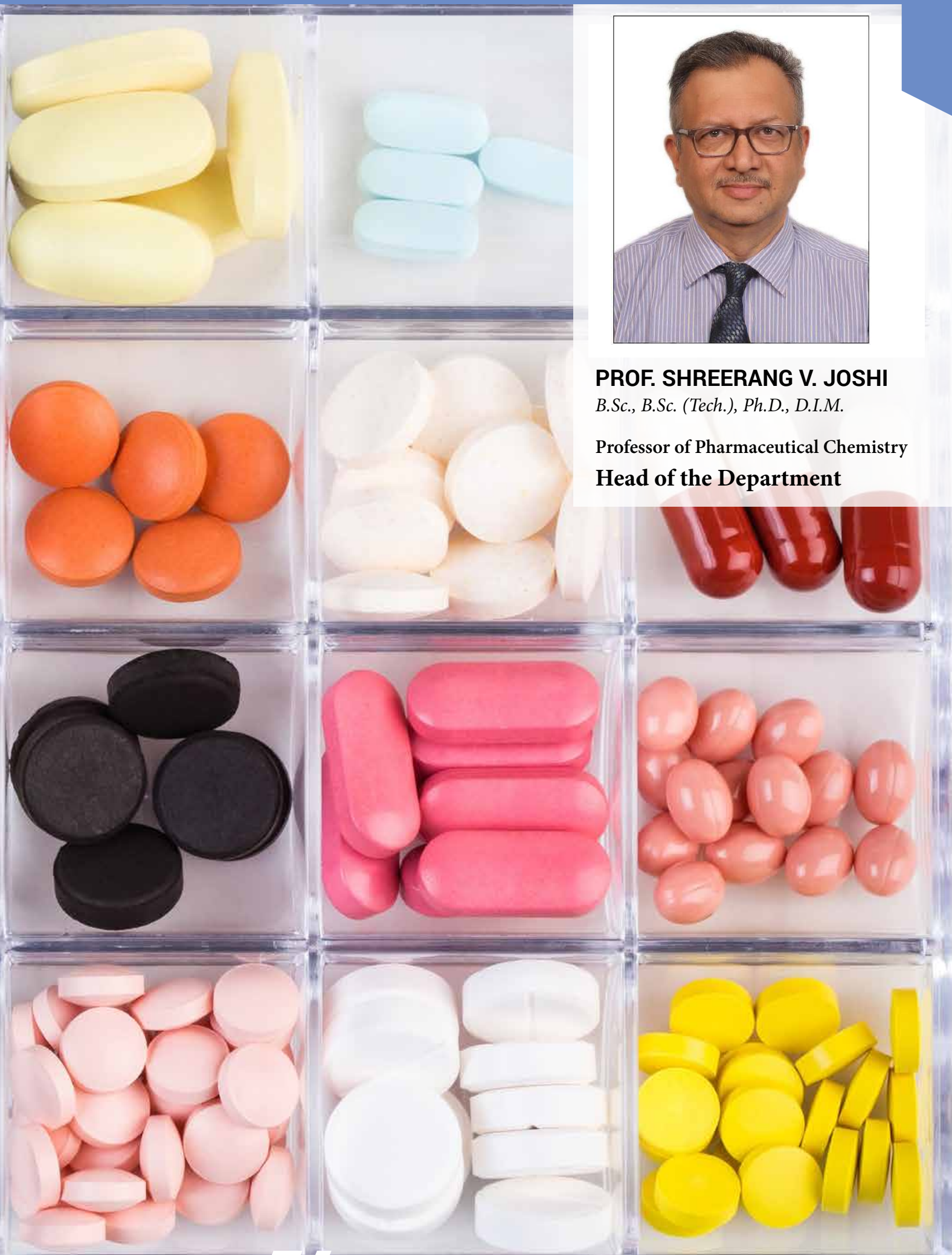
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Department of
**PHARMACEUTICAL
SCIENCES AND
TECHNOLOGY**



PROF. SHREERANG V. JOSHI

B.Sc., B.Sc. (Tech.), Ph.D., D.I.M.

**Professor of Pharmaceutical Chemistry
Head of the Department**





PROF. SHREERANG V. JOSHI

B.Sc., B.Sc. (Tech.), Ph.D., D.I.M. FMAS, FICS

Professor of Pharmaceutical Chemistry

Head of the Department

Biological Importance, Process Development of Drugs, New Methodologies in Organic Synthesis, Synthesis of Drug-Polymers Conjugates

Guided Students: Masters: 04,

Recognized Research Guide for: M.Tech., M. Pharm.

Ph. D. (Sci.), Ph. D. (Tech.)

TOTAL RESEARCH PUBLICATIONS:

International : 12

Patents: 31

H-Index : 9 Citations: 184

SUBJECTS TAUGHT:

Pharmaceutical Organic Chemistry, Spectroscopy, Chemistry of Natural Products, Retrosynthesis, Catalysis and Catalytic Processes

RESEARCH INTEREST:

Synthesis of Natural Products of

AWARDS

1. Vividhlaxi Audyogik Samshodhan Vikas Kendra (VASVIK) Award 2019 (May 2022)
2. Best Paper Award in Review Article Category by IDMA (2020-21)(April 2022)
3. Fellow of Maharashtra Academy of Sciences (2021)
4. Life Fellow, Indian Chemical Society (2022)

PROF. P. D. AMIN

B. Pharm. (Mumbai, 1982), M. Pharm. (Mumbai, 1984),

Ph.D. (Tech.) (Mumbai, 1988)

Professor of Pharmacy



SUBJECTS TAUGHT :

Pharmaceutics, Pharmaceutical Technology, Dispensing Pharmacy, Hospital Pharmacy.

RESEARCH INTERESTS :

Exploration of Hot Melt Extrusion Technology in Innovative Drug Delivery system, Development and evaluation of Fixed Dose Combinations, Improvisation Techniques for Manufacture and Evaluation of Solid Dosage Forms, Release modification designs for drug delivery system Design and Fabrication of Pharma machinery (R and D), Development of Added Functionality Excipients, ophthalmic drug delivery systems, modification in excipients, exploring the use of excipients.

Recognized Research guide for Ph.D.(Tech) in

Pharmaceutics, Pharmaceutical Technology, Bioprocess Technology

Guided students: Ph.D. 27; Masters: 64;

Patents : Granted - 4

TOTAL RESEARCH PUBLICATIONS:

National: 5, International: 51

AWARDS:

Fellow of Maharashtra Academy of Sciences

H-Index :13, Citations : 502.



PROF. GANESH U CHATURBHUJ
M. Pharm. Sc., Ph.D. (Pharmaceutical Chemistry)
Professor of Pharmacy

various bronsted and Lewis solid acid catalyst for chemical reactions. Development of synthetic route for the API, Agrochemicals and fine chemicals and intermediates thereof. Synthesis and spectral characterization of impurities of the API, Agrochemicals and fine chemicals. Recent fields of green chemistry like flow chemistry and electrochemistry for efficient and pollution free organic transformation useful in drug synthesis.

Recognized Research Guide for M. Pharm., M. Tech. (Pharma), M. Tech. (Bioprocess Technology, Ph.D. (Pharmaceutical Chemistry) Ph.D. (Sci.)

Guided students: Ph.D.: 07, Masters: 20

TOTAL RESEARCH PUBLICATIONS-

International 43 Citations 708 and H-index 18

AWARDS:

Best Teacher award by B Pharm ICT, Mumbai, Awarded with UGC Indo-US Raman Post-Doctoral Fellowship to visit Northeastern University, Boston, MA, USA for 2013-2014.

SUBJECTS TAUGHT:

Pharmaceutical Analysis

RESEARCH INTERESTS:

Design, Synthesis and evaluation of the new chemical entities as Anti-inflammatory, Anti-diabetic and anti-cancer agent through rational drug design. Development of

Dr. HEMCHANDRA KESHAV CHAUDHARI
M. Pharm. (Medicinal Chemistry), Ph. D. (Tech.)
(Pharmaceutical Chemistry)
Assistant Professor in Pharmacy



SUBJECTS TAUGHT:

Pharmaceutical Chemistry, Medicinal Chemistry

RESEARCH INTERESTS:

Design of novel molecules using Computer Aided Drug Design/ Molecular modelling. Synthesis of designed novel molecules by conventional or novel routes and evaluation of synthesized molecules for pharmacological activity. Process chemistry and methodology development using green and enzyme catalyst. Impurity synthesis and evaluation for activity.

Recognized Research Guide for: Pharmaceutical Chemistry, PhD (Sci.) in Chemistry and Biochemistry.

Guided students: Ph.D. : 02, Masters: 15

TOTAL RESEARCH PUBLICATIONS-

International: 34

Citations: 656, H-Index- 16

AWARDS:

Best Teacher award by B Pharm ICT, Mumbai, Awarded with UGC SAP for Doctoral Programme Mentor for winner team of Smart India Hackathon 2022



PROF. MARIAM S. DEGANI
B.Pharm, M.Pharm, Ph.D. (Tech)
Professor of Pharmaceutical Chemistry

RESEARCH INTERESTS:

Drug design including ligand, structure and fragment based drug design. Synthesis of focused libraries of potential bioactive molecules for infectious techniques including parallel synthesis and microwave assisted synthesis. Exploration of natural products as therapeutic leads. Fluorine chemistry, process development of drug and drug intermediates, green chemistry using ionic liquids and newer catalytic system development.

Recognized Research Guide for Ph.D. (Tech), Ph.D. (Science), Ph.D.(Biotech),

Guided students: Ph.D.: 32, Masters: 80

TOTAL RESEARCH PUBLICATIONS-

National: 7, International: 89

H-Index: 24, Citations: 1525

SUBJECT TAUGHT:

B.Pharm, B.Tech Pharm, M.Pharm
(Pharmaceutical Chemistry, Medicinal
Chemistry, Rational Drug Design, Organic
Chemistry and Spectroscopy)

AWARDS:

1. Fellow of Maharashtra Academy of Sciences
2. Best Teacher Award of ICT (2012-13, 2014-15)
3. Gharda award 2008-2009 for research publications.
4. Distinguished Alumni Award conferred by C. U. Shah College of Pharmacy, 2007 Mumbai

DR. NITIN D. AROTE

B. Sc. (Pune, 1997), B. Sc. (Tech.) (Mumbai, 2000), M. Sc. (Tech.) (Mumbai, 2003), Ph. D. (Tech.) (Mumbai, 2007).

Associate Professor in Pharmaceutical Technology.



SUBJECT TAUGHT:

Drug Synthesis Approaches, Pharmaceutical Organic Chemistry Pharmaceutical Analysis and Green Chemistry, Advanced Pharmaceutical Technology, Pharmaceutical Organic chemistry, Research Methodology

RESEARCH INTEREST:

Process Chemistry, API Polymorphism Invention of new reactions and reaction and application in synthesis of bioactive molecules, process development. Development of synthetic route for the API, agrochemicals and fine chemicals and intermediates.

Recognized Research guide for M.Tech., M. Pharm. Ph. D. (Sci.), Ph. D. (Tech.)

Guided Students: Ongoing Ph.D: 2, Ongoing M.Tech(Pharma): 6

TOTAL RESEARCH PUBLICATIONS-

International: 4 Citations 152 and H-index 5

Patents: 8



Dr. PRAJAKTA DANDEKAR JAIN

*B. Pharm. (Mumbai, 2003), M. Tech. (Mumbai, 2006),
Ph.D. (Tech.) (Mumbai, 2009)*

**UGC FRP Assistant Professor of Engineering Sciences
Coordinator, M.Tech. Pharmaceutical Biotechnology**

Total Research Publications

National: 01, International: 110, Citations: 2252, H-Index: 25

AWARDS:

1. "Swami Vivekanand Yuva Puraskar 2023" by RSS Jankalyan Samiti, Maharashtra Branch, Pune, for work related to 3D cell culture and organ-on-chip technologies, January 2023
2. "Unch Maza Zoka" Award for Women Achievers by ZEE Entertainment Enterprises Ltd, Mumbai, for work related to 3D cell culture and organ-on-chip technologies, August 2022
3. Savitribai Phule Stree Gaurav Puraskar by Maharashtra Seva Sangha, Mulund, Mumbai, for work related to organ-on-chip technology, April 2021
4. N. R. Kamath Book Award for book entitled 'Targeted Intracellular Drug Delivery by Receptor Mediated Endocytosis', AAPS Advances in the Pharmaceutical Sciences Series, Springer, September 2020
5. M.V. Deshpande Young Scientist Award at the 11th Asia Pacific Chitin and Chitosan Symposium, October 2016
6. N. R. Kamath Book Award for book entitled 'Nanoparticulate Drug Delivery: Perspectives on the Transition from Laboratory to Market', Woodhead Publishing Series in Biomedicine, Woodhead Publishing, July 2014
7. DAE Young Scientist Research Award, 2012
8. Young Associate of Maharashtra Academy of Sciences for the contribution and Engineering and Technology, 2012
9. Ramanujan Fellowship, DST, 2012 Fellowship, DST, 2012

SUBJECTS TAUGHT

Pharmaceutical Biotechnology, Drug Store management

RESEARCH INTERESTS

3D Cell Culture, Electrospun Nanofibers and Tissue Engineering; High-throughput cellular models for toxicity, efficacy and bioassays; Bioprinting; Green Biotechnology and Green Chemistry

Recognized Research Guide for

Ph.D.(Tech.) in Bioprocess Technology and Green Technology, M.Tech in Bioprocess Technology, Green Technology, Pharmaceutical Biotechnology
Guided Students: Ph.D.: 10, Masters: 34



PROF. K. S. LADDHA

B. Pharm. (Mumbai, 1982), M. Pharm. (Mumbai, 1985), Ph.D. (Tech.) (Mumbai, 1994)

Professor of Pharmacognosy

SUBJECTS TAUGHT :

Pharmacognosy, Phytochemistry and Medicinal Natural Products

RESEARCH INTERESTS :

Extraction, isolation and characterization of phytoconstituents, Development of large scale extraction technologies, Standardization of herbal drugs and formulations, Development of herbal drug formulations, Chemical Modification of phytoconstituents.

Recognized Research guide for Ph.D. (Tech) in Pharmacognosy, Pharmaceutical Technology, Bioprocess Technology, Ph.D (Sci) Chemistry
Guided students: Ph.D. 21, Masters: 77

Patents : 12

TOTAL RESEARCH PUBLICATIONS-

National: 72, International: 04,
Citations : 958, H-index : 17

PROF. VANDANA. B. PATRAVALE

*B. Pharm. Sci. (Mumbai, 1985), M. Pharm. Sci. (Mumbai, 1987),
Ph. D. (Tech.) (Mumbai, 1992)*

Professor of Pharmaceutics

SUBJECTS TAUGHT:

Cosmeticology, Advanced Pharmaceutics, Targeted Drug Delivery systems, Pharmaceutics VI, Validation and regulatory affairs, Industrial Pharmacy Laboratory, Novel drug delivery systems.

RESEARCH INTERESTS:

Novel nanocarriers for cosmeceuticals and other pertinent areas of national relevance with major emphasis on malaria, cancer and neurodegenerative disorders.

Specific research interest include

- 1.Nanotechnology based drug and gene delivery systems (lipid, polymeric, micellar nanocarriers, nanosuspensions, micro/nanoemulsions and self-micro/nano emulsifying systems) for bioavailability enhancement and/or targeting.
- 2.Vaccines and adjuvants
- 3.Nanodiagnosics,
- 4.Tissue engineering and scaffolds
- 5.Medical devices viz. coronary stents, intrauterine devices etc.
- 6.Novel carriers for solubilization and formulation development thereof
- 7.New polymer and lipid conjugates, surfactant synthesis
- 8.Exploring potential of indigenous excipients
- 9.Modified release dosage forms for all routes of administration

Recognized Research Guide for Ph.D. (Tech.), Ph.D. (Sci.)

Guided students: Ph.D.: 30, Masters: 74

Total Research Publications:

National: 11, International: 109, H-index: 53, Citations: 11047

Patents (granted in last 5 years): 17

AWARDS:(last 5 years):

- Top Most Healthcare Leaders (Global) organized by World Health and Wellness congress award (2023)
- Top Most Healthcare Leaders (Global) organized by World Health and Wellness congress award (2022)
- Ranked as the top 2% most-cited scientists in a list published

by Stanford University (2022)

- Abdul Kalam National Innovation Fellowship from Indian National Academy of Engineering (INAE) (2021)
- Independent Director, Sahajanand Medical Technologies Pvt. Ltd., Gujarat, India (2021)
- Gandhian Young Technological Innovation (GYTI) Award (2020)
- Kukreja Oration Award by the India Section of International Academy of Cardiovascular Sciences (2020)
- Dr. Manjushree Pal Memorial Award for the best Pharmaceutical Scientist-2019 (2019)
- Prof. Indira Parikh 50 women in education leaders award by 7th World Education Congress (2018)
- Shri Amrut Mody Distinguished Researcher Award by Indian Pharmaceutical Association Maharashtra State Branch's Amrut Mody Research Fund Committee (2018)
- UGC-BSR Mid Career Award Grant 2018 by University Grants Commission
- Gandhian Young Technological Innovation (GYTI) award 2018 under category MLM (More from less for Many) by BIRAC-SRISHTI (2018)
- Gandhian Young Technological Innovation (GYTI) award 2018 under category Socially Relevant Innovation by BIRAC-SRISHTI (2018)



PROF. SADHANA SATHAYE

Ph.D (Tech)

Professor of Pharmacy

SUBJECTS TAUGHT:

Anatomy, physiology and pathophysiology-I, Anatomy, physiology and pathophysiology-II, Anatomy, physiology and pathophysiology laboratory-I, Pharmacology-I

RESEARCH INTERESTS:

Neurological/neurodegenerative disorders like epilepsy, Parkinson's disease and Alzheimer's disease, Diabetes mellitus and diabetic complications, Isolation of phytoconstituents from herbal extracts and their investigation as a promising therapy for disorders mentioned above.

Recognized Research Guide for: Ph.D. (Tech)

Guided students: Ph. D. : 19, Masters: 60

TOTAL RESEARCH PUBLICATIONS-

National: 27, International: 81

H-Index: 20, Citations: 1722

AWARDS:

Fellow, Maharashtra Academy of Sciences;



PROF. V. N. TELVEKAR

B. Sc. (Mumbai, 1992), B. Sc. (Tech.) (Mumbai, 1995), M. Sc. (Tech.) (Mumbai, 1997), Ph. D. (Tech.) (Mumbai, 2003)

Dean, Internal Quality Assurance (IQA)

Professor of Pharmaceutical Chemistry

SUBJECTS TAUGHT :

Medicinal Chemistry, Pharmaceutical Chemistry, Pharmaceutical Engineering, Process Technology of Drugs and Intermediates

RESEARCH INTERESTS :

Invention of new reactions and reaction, Design and synthesis of novel bioactive molecules using Computer aided drug design, total synthesis of bioactive natural products, process development.

Recognized Research guide for Ph.D. (Tech) in Pharmaceutical Technology, Pharmaceutical Chemistry, Bioprocess Technology, Ph.D (Sci) in Chemistry

Guided Students: Ph.D. 14, Masters: 44

TOTAL RESEARCH PUBLICATIONS-

International: 72

Citations : 1092, H-index : 18

PROF. P. R. VAVIA

B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc

Director ICTM-IOCB Campus on deputation and

Professor of Pharmaceutics

SUBJECTS TAUGHT:

Pharmaceutics, Drug Delivery systems, Advanced Pharmaceutics, Biopharmaceutics and Pharmacokinetics

RESEARCH INTERESTS:

Cyclodextrin based drug delivery systems, Nanosponge based drug delivery system, Transdermal drug delivery system, Protein and Peptide drug delivery system, Lipid based colloidal formulations, Polymer synthesis for drug delivery, Modified release films, Melt extrusion technology, Oral liquid dosage forms, Oral modified release systems, Techniques in solubilization, Soft gelatin capsules, Bio-conjugates for active targeting, gene delivery.

Recognized Research Guide for Pharmaceutics

Guided students: Ph.D. 43, Masters: 56

Total Research Publications (Scopus):

National: 21, International: 116,

H-Index : 28, Citations: 2806

Patents: International: 3 [PCT (Granted: 1; Applied: 2)]

National: Granted: 8, Applied: 30



AWARDS:

Best Teacher's Award 2018, Global RESOMER Award 2017 for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA microparticle to targeted intradermal delivery: Proof of concept", Best Teacher's Award 2016, VASVIK Award in the category of Biological Sciences and Technology, for developing the Novel Drug Delivery Systems, Synthesis and application of novel polymers and excipients and targeted drug delivery in cancer treatment, January 2015

PROF. PRASHANT S. KHARKAR FICS

B. Pharm. (Pune, 1998),

M. Pharm. Sci. (Pharmaceutical Chemistry) (Mumbai, 2000),

Ph. D. (Tech.) (Pharmaceutical Chemistry) (Mumbai, 2004)

Associate Dean - Academic Programmes, Coordinator - ICT NICE (Incubator Venture Centre), and Professor of Medicinal Chemistry



SUBJECTS TAUGHT:

Medicinal Chemistry, Pharmaceutical Organic Chemistry, Pharmaceutical Analysis and Green Chemistry, Biopharmaceutics and Pharmacokinetics

RESEARCH INTERESTS:

Design and Development of New Chemical Entities (NCEs) as Anticancer Agents, Cancer Stem Cell (CSC) Inhibitors; Computer-Aided Molecular Design; Synthesis of New Materials and their Biomedical Applications; Drug Repurposing

Recognized Research guide for : Ph. D. (Tech.) in Medicinal Chemistry, Pharmaceutical Chemistry, Biotechnology and Ph. D. (Sci.)

Guided Students: Ph. D.: 05; Masters: 38

Total Research Publications: International 75; National 05
H-Index: 21, Citations: 1605

Patents (Last five years):

International: Granted: 02(US,JP), Published: 07; Filed: 06
National: Published:04, Filed: 06

AWARDS

- Best Research Output of the Year 2017-18 given by SVKM's NMIMS (Deemed to be University), Mumbai (August 11, 2018)
- DST Foreign Travel Grant for presenting research work at

Gordon Research Conference on Computer Aided Drug Design, West Dover, USA. (July 2017)

- Best Poster Award at International Conference on Pure and Applied Chemistry (ICPAC)-2016, Mauritius (July 2016)
- Indian National Science Academy (INSA) deputation under International Collaboration and Exchange Programme to University of Mauritius, Mauritius (2016)
- Best e-Presentation Award at the Virtual Conference on Computational Chemistry (VCCC)-2014 organized by University of Mauritius, Mauritius (August 1-31, 2014)
- Best Poster Award at International Conference on Pure and Applied Chemistry (ICPAC)-2014, Mauritius (June 2014)
- Newton Bhabha Researcher Links Workshop 2019 (In collaboration with University of Birmingham, Birmingham, UK)
- Life Fellow, Indian Chemical Society (2022)



DR. SHIRISHKUMAR D. AMBAVADE

Associate Professor

Department: Pharmaceutical Sciences and Technology

Email Address: sd.ambavade@ictmumbai.edu.in

Phone [Mobile] 9421640269

Research Interest:

Pharmacological evaluation of drugs acting on the central nervous system specifically, for memory enhancement, anti-Alzheimer's, antiepileptics, antidepressants, and anti-anxiety. Evaluation of the role of HDAC in CNS diseases and their pharmacotherapy. Development and evaluation of herbal-originated drugs for the treatment of CNS diseases and disorders, Gastrointestinal diseases, diabetes, and anti-inflammatory activity.
Courses Taught : Human anatomy and physiology, Pathophysiology, Pharmacology, Advance Pharmacology, Receptor Pharmacology, Molecular Pharmacology, Clinical Pharmacology, Research Methodology, Drug Regulatory Affairs, Pharmaceutical Jurisprudence, Clinical pharmacology and drug interactions, Topics in pharmacology.

Publications: 35

H index 14;

i10 index 14

Awards:

- Gold medal for Ph. D thesis by European Ayurvedic Academy, 2007.
- Outstanding Reviewer Award from Elsevier (Journal of Ethnopharmacology) 2018

PROF. PADMA V. DEVARAJAN
Ph. D (Tech) (Pharmaceutics)
Professor of Pharmacy
Dean (Research and Innovation)



SUBJECTS TAUGHT:

Pharmaceutics, Technology of Solid Dosage Forms, Technology of Sterile Dosage Forms, Drug Delivery Systems, Targeted Drug Delivery Systems (DDS), and Formulation of Biologicals.

RESEARCH INTERESTS:

Nano drug delivery systems(DDS): Veterinary Drug Delivery Systems (DDS), Nano drug delivery systems (DDS), Targeted delivery in cancer and infectious diseases (tuberculosis, malaria, veterinary infections), New targeting ligands; Engineering nanoparticle shape, Innovative manufacturing approaches for nano system–bypassing scale up challenges, Transmucosal DDS: Nasal and Sublingual DDS for non-invasive delivery of peptide/protein/biotech molecules; Controlled release and Bio-enhanced DDS: NDA and ANDA.

RECOGNIZED RESEARCH GUIDE FOR M.Pharm (Pharmaceutics), M.Tech Pharmaceutical Technology, M. Tech Pharmaceutical Biotechnology, PhD – Pharmaceutics, Pharmaceutical Technology, Biotechnology, Nanotechnology
 Guided students: Ph.D. 54, Masters: 87, Total Research:141
 Publications:

National: 5, International: 95, Citations: 3342, H-Index- 29

AWARDS:

- Fellow of the Indian Chemical Society- 2020
- Fellow of the Maharashtra Academy of Sciences, India – 2006
- UAA-ICT Distinguished Alumnus Award (Academics)-2021
- President of the Society for Pharmaceutical Dissolution Science, 2021
- “PANJABRAO DESHMUKH OUTSTANDING WOMAN SCIENTIST AWARD 2019” of the Indian Council of Agricultural Research (ICAR), July 2020.
- “OPPI SCIENTIST AWARD 2018” for contribution to research in Veterinary and human healthcare in infectious diseases & cancer, by Organization of Pharmaceutical Producers of India (OPPI), October 2018.
- Awarded IPA ACG INNOVATIVE SOLID DOSAGE FORM Award 2017 at 4th IPA ACG – SciTech Innovation Awards for “N’hance-SDF Bioenhanced Solid dispersion film based technology” by Indian Pharmaceutical Association Dec 2017.
- Awarded BENGALURUNANO INDIA INNOVATION AWARD 2017 for BU’ANTRAP In situ solid lipid nanoparticles for veterinary infection at the 9th Bengaluru India Nano, organized by Karnataka Science and Technology Promotion Society (KSTePS), DST-Nano Mission in association with Jawaharlal Nehru Centre for Advanced Scientific Research Centre (JNCASR) Bangalore, December 2017.
- Won the EUDRAGIT AWARD 2015 for the research publication under the category of “best paper” title “Controlled release floating multiparticulates of metoprolol succinate by hot melt extrusion” published in International Journal of Pharmaceutics 2015;491(1):345- 51 from Evonik India Pvt. Ltd. September,2016.
- PROF. N. R. KAMATH BOOK AWARD AS EDITOR of Book titled “Targeted Drug Delivery Concepts and Design” Edited by Padma V. Devarajan, Sanyog Jain, Published by Springer Publication, by Institute of Chemical Technology, Mumbai. April 2016
- PROF. C.J. SHISHOO AWARD for Research in Pharmaceutical Sciences, conferred by the Association of Pharmaceutical Teachers of India (APTI), September 2013.



Department of POLYMER AND SURFACE ENGINEERING





PROF. SHASHANK T. MHASKE

Ph.D. (Tech.) (Polymer Technology)

Professor of Polymer Technology

Head of the Department





PROFESSOR (DR.) S. T. MHASKE
Ph.D. (Tech) (Polymer Technology)
Dean, Off-Campuses
Head of the Department
Professor of Polymer Technology

SUBJECTS TAUGHT:

Compounding and Polymer Processing, Evaluation and Characterization of Polymers, Polymer Processing & Technology, Nanotechnology and their Application, Polymer Blends and Alloys.

RESEARCH INTERESTS:

Utilization of Bioresources for Value-added Products, Sustainability and Circular Economy of Polymers, Ecological and Economical Product and Process Developments towards Commercialization, Rheology of Polymers.

Recognized Research Guide for:

M. Tech/ Ph. D (Tech) in Polymer Engineering & Technology,

M. Tech/ Ph.D (Tech) in Surface Coating Technology,

M. Tech/ Ph. D (Tech) in Green Technology,

Ph. D (Science) in Chemistry.

Guided Students:

Ph.D. (Tech.): Completed – 16, Ongoing - 13,

Ph.D. (Sc): Completed – 03, Ongoing - 5,

M. Tech.: Completed – 78, Ongoing – 15.

Total Research Publications:

International: 142 (Scopus),

Total Citations: 2447 (Scopus),

h-index: 25 (Scopus),

Patents: 06, European: 02 (Granted), Indian: 04 (Granted), 02 (Filed),

Book Chapters: 10 (RSC, CRC Press, Elsevier, Springer, etc.)

AWARDS:

- Fellow, Maharashtra Academy of Sciences. Govt. of Maharashtra.
- Auditor for auditing of Producers/Importers & Brand-owners (PIBOs) Plastic Waste Processors (PWPs), Central Pollution Control Board (CPCB), Ministry of Environment, Forest and Climate Change, Govt. of India.
- Technical Expert, Plastic Waste Committee, Maharashtra Pollution Control Board (MPCB), Single Plastic Use, Environmental Ministry of Govt. of Maharashtra.
- Expert to Technical Advisory Committee (TAC) of LPG Equipment Research Centre (LERC) – Joint Venture of BPCL, IOCL and HPCL.
- Editor to Economic Times- “Polymer” Journal.
- Jury Member to Economic Times Award.
- National Award for Technology Innovation in “Green Polymeric Materials & Products” By Dept. of Chemicals and petrochemicals, Ministry of Chemicals and fertilizers. Govt. of India.
- Young Associate, of Maharashtra Academy of Sciences. Govt. of Maharashtra.
- Best Teacher Award, ICT (2015).



PROF. R. N. JAGTAP

B.Sc., B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. Tech.

Professor of Paint Technology



SUBJECTS TAUGHT:

Advanced Surface Coating Technology, High Performance Coatings, Technology of Printing Inks, Specialty Plastics, Paint Processing and Characterization, Radiation Curable Coating, Environmentally Friendly Coatings, Additives for polymers, Specialty Polymers, Polyelectrolyte and ionomers

RESEARCH INTEREST:

Biopolymers for coatings, adhesives and biodegradable packaging films, Resins for Radiation curable coatings, 3D Printing, Microencapsulation, Controlled Radical Polymerization for Tailor-made Polymers, High temperature and corrosion resistant coating, Recycling of polymers from waste to wealth.

Recognized Research Guide for:

M.Tech., Ph.D, Surface Coating Technology,
M.Tech., Ph.D, Polymer Engineering and Technology,
M.Tech., Ph.D, Green Technology, Chemistry
Ph.D. Science in Chemistry

Guided Students:

Guided students: Ph.D.: 15, Masters: 120

Ongoing students: Ph.D.: 6, Masters: 10

Total Research Publications:

International: 58 (Scopus),

Total Citations: 714 (Scopus),

h-index: 17 (Scopus),

Patents: Granted 05, Applied 03

AWARDS:

- Member, FSSAI Scientific panel on Packaging



Dr. ANAGHA SHAMSUNDAR SABNIS

B.Sc. (Tech.), M.Sc. (Tech.), Ph.D. (Tech.)

Associate Professor in Technology of Plastics and Paints

RESEARCH INTERESTS:

Coatings based on renewable resources materials, Recycling of polymer waste and coatings thereof, Advancement in anticorrosive coatings Flame retardant coatings, Nonisocyanate polyurethane coatings etc.

Recognized Research Guide for:

Ph.D. (Tech.) / M.Tech. in Polymer Engineering & Technology

Ph.D. (Tech.) / M.Tech. in Surface Coating Technology

Ph.D. (Science) in Chemistry

Guided Students:

Guided students: Ph.D.: 04, Masters: 30

Ongoing students: Ph.D.: 02, Masters: 12

Total Publications:

International: 55 (Scopus),

Total Citations: 1367 (Scopus),

h-index: 20 (Scopus),

Patents: Granted 02, Applied 01

AWARDS:

- Recipient of 8th National Awards for Technology Innovation in Petrochemical & Downstream Plastics Processing Industry (2017-18), Govt. of India (Second Rank)
- CRISP fellowship by Cherening (UK Govt.) and Rolls Royce.
- Super Achiever Award for Excellence in research in Polymers and Paint Technology, (WISE) (UNESCO)

SUBJECTS TAUGHT:

Analysis and characterization of raw materials and polymers I, Pigments and additives for polymers, Paint Technology I, Processing of Paints I, Insulating and Intumescent coatings, Processing of Paints II, Analysis and Testing of Paints, Processing of Paints IV, Advance polymer science I, Additives for coatings

Dr DIPAK V. PINJARI

B.Tech. M.Tech. Ph.D. (Tech) Chemical Engg

UGC Assistant Professor (Engineering Sciences) and DST Inspire Faculty

Fellow

SUBJECTS TAUGHT:

Environment Health and Safety of Polymers and Coating, Structure Property relationship of polymers, High Polymer Chemistry, Introduction to Polymer Science, Advanced Characterization Laboratory of Polymers, Introduction to Nanotechnology, Environmental Sci. & Tech.

RESEARCH INTERESTS:

Cavitation Engineering and Technology, Fiber Science, Cellulose Chemistry and Application, Synthesis of Nanomaterials, Polymer Engineering and Technology, Surface Coating and Technology and Sustainable Developments
Recognized Research Guide for:

Ph.D. (Tech.) / M.Tech. in Polymer Engineering & Technology

Ph.D. (Tech.) / M.Tech. in Surface Coating Technology

Ph.D. (Tech.) in Chemical Engineering

Ph.D. (Science) in Chemistry

M.Tech in Perfumery and Flavours Technology

M.Tech in Bioprocess Technology

Guided Students:

Guided students: Ph.D.: 06, Masters: 15

Ongoing students: Ph.D.: 06, Masters: 10

Total Publications:

International: 100 (Scopus),

Total Citations: 4616 (Scopus),

h-index: 36 (Scopus),

Patents: Granted 01, Applied 06

AWARDS:

- Fellow, Maharashtra Academy of Science (2022)
- Guest Editor, Chemical Engineering and Processing: Process Intensification (Voices of Young Generation: Process Intensification), an Elsevier Journal.
- Member, The National Academy of Sciences, Allahabad, India (NASI) 2020 – till date
- Member, Early Career Advisory Board, Chemical Engineering and Processing: Process Intensification, an Elsevier Journal.
- Expert Member of the Department of Science and Technology (Multilateral Department) for the first SCO Young Scientist Conclave 2020 (to be organized in India). Shanghai Cooperation Organization (SCO) consists of 8 countries.



- SPS Young Scientist Award 2019 by Scientific Planet Society, Dehradun, India
- BRICS Young Scientist Award 2019 by Ministry of Science and Technology of BRICS Countries (Brazil, Russia, Indian, China and South Africa).
- Accolades from Qingdao International Academy Park (QIAP), Government of China for work in the area of Material Science and Chemical Engineering. The QIAP has requested to join the park in June 2019.
- Member, Global Young Academy, Germany (2019-2024)
- Awarded Infosys Social Innovation Award 2018-2019 by Infosys Foundation, Bengaluru, India.
- INAE Young Associate 2017 by The Indian National Academy of Engineers, New Delhi, India
- INAE Young Engineer Award 2016 by The Indian National Academy of Engineers, New Delhi, India
- Finalist, INSA Medal for Young Scientist 2015 and 2016
- Finalist, NASI Young Scientist Awards 2014 and 2015
- Awarded Fulbright OLF Award 2015 by OIE and CIES (State Departments, US Federal Government, Washington, USA)
- Awarded Young Engineers Award 2014-2015 by The Institution of Engineers (India)
- Awarded Wipro Earthian Award 2013 by Wipro foundation, Bangalore (India)
- Young Associate, Maharashtra Academy of Science (2013)
- Awarded M. P. Chary Memorial Award 2013 for research and technological contribution (below 35 years) by Indian Institute of Chemical Engineers (IICChE), India.

Dr. A. R. RAO

B.Tech., M.Tech., Ph.D. (Tech.)

Assistant Professor of Polymer Technology



SUBJECTS TAUGHT:

Technology of Thermoplastics Processing of Polymers, Polymer Composites and Post processing of polymers, Analysis and Characterization of polymers.

RESEARCH INTERESTS:

Biobased polymers, Biodegradable and biodegradation of Polymers, Polyurethane Resins, Polymer blends, Control Radical Polymerization, Anticorrosive coatings, Polymer Nanocomposites, Phase Change materials.

Recognized Research Guide for:

Ph.D. (Tech.) / M.Tech. in Polymer Engineering & Technology

Ph.D. (Tech.) / M.Tech. in Surface Coating Technology

Guided Students:

Guided students: Ph.D.: 0, Masters: 14

Ongoing students: Ph.D.: 02, Masters: 11

Total Publications:

International: 08 (Scopus),

Total Citations: 60 (Scopus),

h-index: 03 (Scopus)

AWARDS:

- Recipient of AICTE-RPS Research Grant



DR. A. P. MORE

B.Tech., M.Tech. Ph. D (Tech)

Assistant Professor in Plastics and Paints

RESEARCH INTERESTS:

Nanoparticles, Anticorrosive coating, Layered Double Hydroxide, Bio-based Resin, Conductive polymers, Polymer composites.

Recognized Research Guide for:

Ph.D. (Tech.) / M.Tech. in Polymer Engineering & Technology

Ph.D. (Tech.) / M.Tech. in Surface Coating Technology

Guided Students:

Guided students: Ph.D.: 0, Masters: 0

Ongoing students: Ph.D.: 01, Masters: 16

Total Publications:

International: 30 (Scopus),

Total Citations: 240 (Scopus),

h-index: 09 (Scopus)

AWARDS:

- Technical paper award- Institute Category in Indian Paint Association (IPA) 2023 conference
- Open Innovation challenge – Application innovation for vestenamer in Evonik, 2022
- DST Inspire Fellowship Govt. of India.

SUBJECTS TAUGHT:

Polymer science and technology, High Polymer Chemistry, Identification of resins and polymers lab, Structure-property relationships in Polymers, Nanomaterials, Synthesis, and characterization of resin and polymers lab, Synthesis, processing and characterization of colorants lab, Analysis and testing of paints.





Department of **CHEMISTRY**



PROF. BHALCHANDRA M. BHANAGE

M.Sc, Ph.D. (FRSC, FMASc)

Professor of Industrial and Engineering Chemistry

Head of the Department





PROF. BHALCHANDRA M. BHANAGE

M.Sc, Ph.D. (FRSC, FMASc, FBRI, FICS)

**Professor of Industrial and Engineering Chemistry
Head of the Department**

Guided students: Ph.D. 50, Masters: M.Sc. 25; M.Tech. 21

TOTAL RESEARCH PUBLICATIONS:

National: 03, International: 431, Edited Books: 2; Book Chapters: 31
Citations: 17175; H-Index : 67

PATENTS : Granted: 29; Filed: 6

AWARDS:

- Fellow of the Royal Society of Chemistry, UK (FRSC)
- Fellow of the Biotech Research Society of India (FBRSI).
- Fellow of the Indian Chemical Society (FICS)
- Fellow of the Maharashtra Academy of Sciences (FMASc)
- Dr Sarojini Devi Memorial Award, by Higher Education Forum, 2018
- ISCMA Outstanding Professor Award by Indian Specialty Chemical Manufacturer Association for excellence in academic field for the year in 2016
- South Indian Education Society's "Best Teacher Award 2017-2018"
- ISCMA Outstanding Professor Award by Indian Specialty Chemical Manufacturer Association for excellence in academic field for the year in 2015
- Prof. M.M. Sharma Science and Technology Award (Rs 1 lakh and Citation) for contributions in research by Marathi Vidyan Parishad, 2014
- Bronze Medal for Contributions in Research by Chemical Research Society of India, 2012; RSC-PTG best paper award by Royal Society of Chemistry 2011

SUBJECTS TAUGHT:

Organic Chemistry, Organometallic Chemistry, Catalysis

RESEARCH INTERESTS:

Catalysis, Ionic Liquids, Nanomaterials, Enzymatic Catalysis, Coupling Reactions, Amination, Reactions using CO, CO₂ and hydrogen.

RECOGNIZED RESEARCH GUIDE

FOR: Chemistry, Green Chemistry and Technology, Biotech Sciences, NanoScience and Nanotechnology.

Dr. VIJAY KUMAR A.

Ph.D.

Assistant Professor in Organic Chemistry

SUBJECTS TAUGHT:

Organic Synthesis (MSc), Stereochemistry(MSc), Biochemistry (MSc), Organic Chemistry (M.Sc.), Supramolecular Chemistry (MSc), Organic Chemistry Laboratory (MSc), Organic Chemistry (F.Y. B.Chem Eng and F.Y. B.Tech), Organic Chemistry Laboratory II, (F.Y. B.Chem Eng and F.Y. B.Tech)

RESEARCH INTERESTS:

Organic Synthesis, Biomimetic Organic Synthesis, Aerobic oxidation, Green Reagents Drugs and Natural products Synthesis, Catalysis for Total Synthesis, Valorization of Biomass related products, Supramolecular Chemistry/ Catalysis

Recognized Research Guide for: Chemistry

Guided students: Ph.D. 05; Masters: M.Sc. 16

TOTAL RESEARCH PUBLICATIONS:

International: 40, Book Chapters: 01

Citations: 1950; H-Index : 23

Patents: Granted: 01

AWARDS:

- M.Sc. Chemistry best Teacher Award, CMP Endowment (2019-2020, 2017-2018, 2015-2016, 2014-2015)
- B.Tech. Best Teacher Award (2015-16 & 2014-15)



- INSPIRE Faculty Award, Department of Science and Technology (DST) (2012)
- Postdoctoral Fellowship at Department of Chemistry, BenGurion, University of the Negev, Israel (2012)
- Sri Gopal Kishan Rao Vepachedu Memorial Best Senior Research Fellow Award in Organic Chemistry, Indian Institute of Chemical Technology, Hyderabad, India (2011)
- CSIR-UGC Research Fellowship Award (2006)

PROF. RADHA V. JAYARAM

M.Sc., Ph.D.

UGC BSR Professor

SUBJECTS TAUGHT:

Chemical kinetics and phase equilibria, quantum chemistry, catalysis, surface and interfacial chemistry, solid state chemistry.

RESEARCH INTERESTS:

Heterogeneous Catalysis, Green Chemistry, Multi-component

Reactions, Structurally Ordered Materials, Functional Polymers and Adsorption Techniques for Removal of Water Pollutants, Recovery of Spent Metals, Enzyme Catalysis

Recognized Research Guide for: Chemistry and Green Technology

Guided students: Ph.D. 28; Masters: M. Sc.: 31; M.Tech.: 17

TOTAL RESEARCH PUBLICATIONS:

International: 107, **Citations:** 3528; H-Index : 34

Book Chapters: 02, **Patents :** Granted: 01

AWARDS:

- UGC– BSR Faculty Fellowship (2021)
- Elected Fellow of Maharashtra Academy of Sciences (F.M.A.Sc.);



- Member, Scientific committee, 48th International Chemistry Olympiad, July 2016(Tbilisi, Georgia)
- CMP Endowment Best Teacher Award 2014-15,
- Best Woman Teacher award by the Association of Chemistry Teachers India 2015-16
- Dr. K. H. Gharda Reward for “Excellence in research” (2009)



DR. ANANT R. KAPDI

M. Sc.; M. Sc. By Research (University of York, UK), Ph. D.

(University of York, UK)

(FRSC, AVH Fellow)

UGC FRP Assistant Professor

Former Deputy Director, ICTM-IOC Bhubaneswar

Central Placement Coordinator

Recognized Research Guide for Chemistry

Guided students: Ph.D. 10, Masters: 40

TOTAL RESEARCH PUBLICATIONS

National: 02, International: 100

Book Chapters: 17; Books: 03 (Edited)

H-Index: 34, Citations: 6881

AWARDS:

- British Council UK Education Alumni award finalist 2021-22.
- Fellow of Royal Society of Chemistry, London as Leaders in the Field category, 2021
- Wellcome Trust/DBT India Alliance Early Career Fellow for 2021
- Alexander von Humboldt Fellowship 2008
- Alexander von Humboldt Return Fellowship 2013
- DAAD Fellowship for Scientists 2014
- Young Associate of Maharashtra Academy of Sciences
- Fellow Maharashtra Academy of Sciences 2016
- Associate Editor of Royal Society of Chemistry Journal RSC
- Advances 2015-17
- Prof. N. R. Kamath book award 2018
- C. B. Murarka Best Assistant Professor award 2019

SUBJECTS TAUGHT:

Organic Chemistry, Natural Products, Heterocyclic Chemistry, Analytical Chemistry, Organic Chemistry Practicals

RESEARCH INTERESTS:

Palladium catalysis, Nucleoside modification, Heteroarene modification, Commercial scale process optimization, Drugs synthesis, New product development



Dr. P. M. MORE

M.Sc., Ph.D.

Assistant Professor of Analytical Chemistry

SUBJECTS TAUGHT:

Analytical Chemistry, Analytical and Physical Chemistry Lab, Physical Pharmacy Lab., Instrumental Methods of Analysis, Physical Chemistry Lab., Nanochemistry

RESEARCH INTERESTS:

Heterogeneous Catalysis, Synthesis of various mixed metals based catalysts using different methods for selective oxidations and environmental application. Total oxidation of volatile organic compound using non-noble metal based catalyst. Development of non-noble metal based diesel exhaust oxidation catalyst.

RECOGNIZED RESEARCH GUIDE FOR CHEMISTRY

Guided students: Ph.D.: 01, Masters: M. Sc.: 12

TOTAL RESEARCH PUBLICATIONS

National: 01; International: 21

H-Index: 10, Citations: 287

PATENTS: 01



Dr. SHRAEDDHA TIWARI

M. Sc. Ph. D.

Assistant Professor in Physical and Inorganic Chemistry

SUBJECTS TAUGHT:

Physical Chemistry, Physical Pharmacy, Analytical Chemistry, Instrumental Methods of Analysis, Surface and Interfacial Chemistry, Computational Chemistry

RESEARCH INTERESTS:

Neoteric solvents (ionic liquids / deep eutectic solvents), Mechanistic studies of Organic Reactions, Vibrational Spectroscopy, Chemical processes in confined media, Interfacial processes / "on water" processes

RECOGNIZED RESEARCH GUIDE FOR CHEMISTRY

Guided students: Ph.D.: 04, Masters: M. Sc.: 14

TOTAL RESEARCH PUBLICATIONS

International: 22

H-Index: 09, Citations: 393

AWARDS:

- Best Teacher Award, CMP Endowment (2017)
- Best Teacher Appreciation Award, CMP Endowment, Department of Chemistry (2014)
- DST INSPIRE Faculty Award (2013)
- Postdoctoral Research Fellow at Department of Chemistry, School of Science, The University of Tokyo







PROF. VIVEK R. GAVAL

*B.E. (Production)(Mumbai,1987),
M.E. (Plastic Engg) (Mumbai,1991),
Ph.D. (Tech)(Mumbai,2012)*

Head of the Department



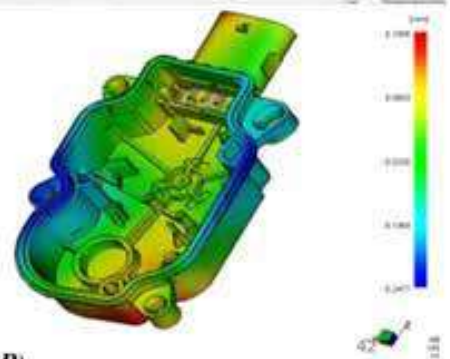
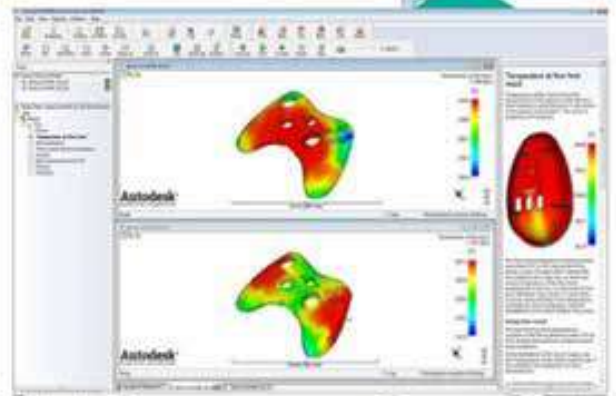
Equipment's Available in Laboratories

CAD/ CAM/CAE Lab



Softwares Available

- Solidworks
- Moldex3D
- AutoCAD 2020
- ANSYS
- Minitab 18.1
- Hypermesh
- Unigraphics-NX
- 3D-Printer (FDM/DLP)



- 3D-Printer (FDM/DLP)



PROF. VIVEK R. GAVAL

B.E (Production) (Mumbai 1987), M.E Plastic Engg. (Mumbai 1991), Ph.D. (Tech) (Mumbai 2012)

Professor in General Engineering and Head of the Department

SUBJECTS TAUGHT:

Energy Engineering, Equipment Design and Drawing, Engineering Graphics, Design and fabrication of moulds, Finite Element Analysis, Processing of plastics laboratory, Research Methodology.

RESEARCH INTERESTS:

Particulate filled polymer composites, conversion of Metal parts into plastic parts, Tribology, Improvement in existing injection moulding simulation software's focusing on war page and weld line strength prediction, Solar Energy.

Recognised guide for: Ph.D. (Tech) in Mechanical Engineering and Plastic Engineering.

Guided students: Ph.D.: 04, Ongoing: 12 | Masters guided: 43, Ongoing: 04

RESEARCH PUBLICATIONS: International: 30, h-index: 6, Citations: 128

Patent information: 01 granted, 01 filed.

Projects: 02 (INR 2.5 crores)

PROF. SURESH P. DESHMUKH

D.M.E. (Mechanical) (Ratnagiri 1983), B.E. (Production) (Mumbai 1986), M.E Production (Mumbai 1992), Ph.D. (Tech) (Mumbai 2009)

Professor of Mechanical Engineering And Workshop Superintendent

SUBJECTS TAUGHT:

Equipment Design and Drawing-I, Engineering Graphics, CAD/CAM/CAE.

RESEARCH INTERESTS:

Polymeric Composites, Engineering Materials, Plastic Processing, Design of Molds, Analysis of Plastic component using CAD, CAE tools. Solar Hybrid Energy, Refrigeration Air Conditioning, Heat Transfer through microchannel.

Recognised guide for: Ph.D. (Tech.) in Mechanical Engineering, Plastic Engineering, Electrical Engineering, Electronic Engineering

Guided students: Ph.D.: 07, Masters: 23

RESEARCH PUBLICATIONS: National:7, International: 65, h-index: 14, i-10 Index: 17, Citations: 592



PROF. DILIP D. SARODE

B.E (Civil) (Mumbai 1986), M.E (Structural) (Mumbai 1989), Ph.D. (Tech) (IIT Bombay 2010), PGD Const Mgt (NICMAR 1987), DCST (Mumbai 1999)

Professor of Civil Engineering and Hostel Head Warden

SUBJECTS TAUGHT:

Concrete Technology, Construction Chemicals, Risk Analysis and its mitigation, Recycling of wastes, Water and wastewater treatment, Recycling of agricultural and industrial waste.

RESEARCH INTERESTS:

Concrete Technology Construction Chemicals - Risk Analysis and its mitigation. Recycling of wastes.

Recycling of agricultural waste and improving soil fertility.

Recognised guide for: M.E. (Plastic), Ph. D. (Tech) in Civil Engineering and Plastic Engineering.

Guided students: Ph.D.: 02, Ongoing: 08, Masters: 11, Ongoing: 7

RESEARCH PUBLICATIONS: National: 14, International: 12, h-index: 5, i10 Index: 3, Citations: 345

Patent Information: National: (granted) 02, International: 01 (Applied)



PROF. R.S.N. SAHAI

B.E (Mechanical Engg.), M.E (Plastic Engg.), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2013)

Professor of Mechanical Engineering and Dean (ICD)

SUBJECTS TAUGHT:

Engineering Graphics I and II, Energy Engineering, Processing of Plastics, Principle of Plastic Machinery Design, Advance Polymer based Materials in Engineering Applications

RESEARCH INTERESTS:

Applications of Polymer composites in Mechanical Engineering, Natural Fiber Composites, Hybrid Composites, Nano composites, Refrigeration, Thermal Engineering, Heat Exchangers.

Recognized Research Guide for: Ph.D. Tech in (Mechanical Engg.), M.E (Plastic Engg.), and Ph.D. Tech

in (Plastic Engg.), Ph.D. Guide (Ongoing): 9, M.E. Guided: 20

RESEARCH PUBLICATIONS: International: 17, h-index: 04, i10-index -3, Citations: 65

DR. PRERNA GOSWAMI

B.E (Electrical), M.E. (Instrumentation and Control), Ph.D. (Tech) (Electrical Engg.) (Mumbai 2018)

Associate Professor in General Engineering (Electrical)

SUBJECTS TAUGHT:

Electrical Engineering and Electronics (Theory and laboratory),
Basic Electrical and Electronics (Theory and laboratory)

RESEARCH INTERESTS:

Sustainable Energy and MATLAB simulations

Recognised guide for: Ph.D. (Tech.) in Electrical Engineering,

Guided students: Ph.D. Students Ongoing: 11

RESEARCH PUBLICATIONS: National: 10, International: 27, H index 7, i10 index 4, citations 129



DR. DEEPANKAR BISWAS

B.E. (Mechanical) (Mumbai 2012), M.E Mechanical-Thermal Engg. (Mumbai 2014), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2020)

Assistant Professor of Mechanical Engineering

SUBJECTS TAUGHT:

Energy Engineering, Engineering Graphics-I, CAD/CAM/CAE, Plastic Product Design and Testing of Plastics, Finite Element Analysis, Equipment Design and Drawing-II

DR. VIKRAMSINHA S. KORPALE

B.E. (Mechanical) (2011), M.E. Plastic Engg. (Mumbai 2013), Ph.D. (Tech) (Mechanical Engg.) (ICT Mumbai 2021)

Assistant Professor of Mechanical Engineering



SUBJECTS TAUGHT:

Engineering Graphics I and II, Mold Designing Laboratory, CAD/CAM/CAE and Design of Molds, Plastic Product Design and Testing of Plastics, Structural Mechanics Laboratory, Equipment Design and Drawing-I

RESEARCH INTERESTS:

Thermal design of equipment, Plastic products design and analysis, computational fluid dynamics, Equipment design and analysis, powder-flow equipment designs.

RESEARCH PUBLICATIONS: International: 05, National: Nil, h-index:04, i10 Index:03, Citations: 96





$H = \frac{P^2}{2m} + \frac{1}{2}m\omega^2 x^2$ $\langle \varphi_n | a^\dagger | \varphi_n \rangle = \sqrt{n+1} \delta_{n, n-1}$ $\frac{1}{\sin \theta} dt^{-1} ML^2$
 $H|\varphi\rangle = E|\varphi\rangle$ $\langle \varphi_n | X | \varphi_n \rangle = \sqrt{\frac{\hbar}{2m\omega}} [\sqrt{n+1} \delta_{n, n+1} + \sqrt{n} \delta_{n, n-1}]$ $E = \frac{1}{2} M \omega^2 x^2$
 $[-\frac{\hbar^2}{2m} \frac{d^2}{dx^2} + \frac{1}{2}m\omega^2 x^2] \varphi(x) = E \varphi(x)$ $\langle \varphi_n | P | \varphi_n \rangle = i\sqrt{\frac{\hbar}{2m\omega}} [\sqrt{n+1} \delta_{n, n+1} - \sqrt{n} \delta_{n, n-1}]$
 $\hat{X} = \sqrt{\frac{m\omega}{\hbar}} X$; $\hat{P} = \frac{1}{\sqrt{m\hbar\omega}} P$ $(a^\dagger) = \begin{bmatrix} 0 & \sqrt{1} & 0 & 0 & \dots & 0 \\ 0 & 0 & \sqrt{2} & 0 & \dots & 0 \\ 0 & 0 & 0 & \sqrt{3} & \dots & 0 \\ \dots & \dots & \dots & \dots & \dots & \dots \\ 0 & 0 & 0 & 0 & \dots & \sqrt{n} \end{bmatrix}$
 $[\hat{X}, \hat{P}] = i$ $H = \hbar\omega \hat{H}$ $\hat{H} = \frac{1}{2}(\hat{X}^2 + \hat{P}^2)$
 $\hat{H}|\varphi_n\rangle = E_n|\varphi_n\rangle$ $\langle \varphi_n | \varphi_n \rangle = \frac{1}{\sqrt{n!}}$
 $a = \frac{1}{\sqrt{2}}(\hat{X} + i\hat{P})$ $[a, a^\dagger] = \frac{1}{2}[\hat{X} + i\hat{P}, \hat{X} - i\hat{P}]$
 $a^\dagger = \frac{1}{\sqrt{2}}(\hat{X} - i\hat{P})$ $\varphi_n(x) = \left[\frac{1}{2^n n!} \left(\frac{\hbar}{m\omega} \right)^{1/4} \left(\frac{m\omega}{\pi\hbar} \right)^{1/4} \left(\frac{m\omega}{\hbar} \right)^{1/4} \left(\frac{m\omega}{\hbar} x - \frac{d}{dx} \right)^n e^{-\frac{m\omega}{2\hbar} x^2} \right]$
 $a^\dagger a = \frac{1}{2}(\hat{X}^2 + \hat{P}^2 - 1)$ $\varphi_0(x) = \left(\frac{m\omega}{\pi\hbar} \right)^{1/4} e^{-\frac{m\omega}{2\hbar} x^2}$
 $\hat{H} = \hbar\omega \left(a^\dagger a + \frac{1}{2} \right)$ $\langle \varphi_n | \varphi_n \rangle = 1$
 $\hat{H} = a a^\dagger - \frac{1}{2}$ $E = mc^2$
 $a^\dagger |\varphi_n\rangle = \sqrt{n+1} |\varphi_{n+1}\rangle$ $i\hbar \frac{\partial}{\partial t} \psi(\vec{r}, t) = -\frac{\hbar^2}{2m} \Delta \psi(\vec{r}, t)$
 $a |\varphi_n\rangle = \sqrt{n} |\varphi_{n-1}\rangle$ $\Delta = \frac{\partial^2}{\partial x^2} + \frac{\partial^2}{\partial y^2} + \frac{\partial^2}{\partial z^2}$
 $a |\varphi_n\rangle = \frac{1}{2} a a^\dagger |\varphi_{n-1}\rangle = \frac{1}{\sqrt{n}} (a^\dagger a + 1) |\varphi_{n-1}\rangle$
 $= \sqrt{n} |\varphi_{n-1}\rangle$ $\lambda_1 |\varphi_1\rangle + \lambda_2 |\varphi_2\rangle \Rightarrow \lambda_1^* \langle \varphi_1| + \lambda_2^* \langle \varphi_2|$
 $X|\varphi_n\rangle = \sqrt{\frac{\hbar}{m\omega}} \frac{1}{\sqrt{2}} (a^\dagger + a) |\varphi_n\rangle$ $\xi_{x_0}^{(r)}(x) \Leftrightarrow |\xi_{x_0}^{(r)}\rangle$ $E = \langle K \rangle$
 $= \sqrt{\frac{\hbar}{2m\omega}} [\sqrt{n+1} |\varphi_{n+1}\rangle + \sqrt{n} |\varphi_{n-1}\rangle]$ $\epsilon \neq 0 \Rightarrow |\xi_{x_0}^{(\epsilon)}\rangle \in \xi_x$
 $\langle \xi_{x_0}^{(\epsilon)} | \psi \rangle = (\xi_{x_0}^{(\epsilon)}, \psi) = \int_{-\infty}^{\infty} dx \xi_{x_0}^{(\epsilon)}(x) \psi(x)$



Department of MATHEMATICS



DR. AJIT KUMAR
 B.Sc., M.Sc., Ph.D.
Professor and Head
Department of Mathematics

$$g L \theta_0^2; \theta_0^2 = \frac{2E}{MgL}$$

$$\frac{d\theta}{dt} = \left(\frac{g}{L}\right)^{1/2} (\theta_0^2 - \theta^2)^{1/2}$$

$$\frac{d^2 r}{dt^2} = \frac{d^2 r}{d\phi^2} \cdot \left(\frac{d\phi}{dt}\right)^2$$

$$\frac{d\theta}{(\theta_0^2 - \theta^2)^{1/2}} = \left(\frac{g}{L}\right)^{1/2} dt = \frac{d^2 r}{d\phi^2}$$

$$\int_{\theta_0}^{\theta} \frac{d\theta}{(\theta_0^2 - \theta^2)^{1/2}} = \left(\frac{g}{L}\right)^{1/2} \int_0^t dt$$

$$\int_{\theta_0}^{\theta} \frac{d\theta}{(\theta_0^2 - \theta^2)^{1/2}} = \left[\text{Arcsin} \left(\frac{\theta}{\theta_0} \right) \right]_{\theta_0}^{\theta} = \text{Arcsin} \left(\frac{\theta}{\theta_0} \right) - \text{Arcsin} \left(\frac{\theta_0}{\theta_0} \right)$$

$$= \left(\frac{g}{L}\right)^{1/2} t$$



$$f_0 = \frac{\omega_0}{2\pi} = \frac{(g/L)^{1/2}}{2\pi}$$

$$N_a = (\vec{r} \times \vec{F})_a = 2Mg \sin \theta$$

$$\vec{\tau}_a = (\vec{r} \times \vec{P})_a = -ML^2 \ddot{\theta}$$

$$ML^2 \ddot{\theta} = -2Mg \sin \theta$$

$$\ddot{\theta} + \frac{g}{L} \sin \theta = 0$$

$$F_a = -C_a \quad M \ddot{x} = -C_x \quad \ddot{x} + \frac{C}{M} x = 0$$

$$x = A \sin(\omega_0 t + \phi) \quad \ddot{x} = -\omega_0^2 A \sin(\omega_0 t + \phi)$$

$$\ddot{x} + \omega_0^2 x = 0 \rightarrow \omega_0 = \left(\frac{C}{M}\right)^{1/2} \quad v_0 = \omega_0 A \cos \phi$$

$$x = A \sin(\omega_0 t + \frac{1}{2}\pi) = A \cos(\omega_0 t)$$

$$K = \frac{1}{2} M \dot{x}^2 = \frac{1}{2} M \left[\omega_0 A \cos(\omega_0 t + \phi) \right]^2$$

$$\int |\Psi(\vec{r}, t)|^2 d^3 r = 1$$

$$\langle K \rangle = \frac{\int_0^T K dt}{T} = \frac{1}{2} M \omega_0^2 A^2 \int_0^{2\pi/\omega_0} \frac{\cos^2(\omega_0 t + \phi) dt}{2\pi/\omega_0}$$

$$\langle U \rangle = \frac{1}{2} M \omega_0^2 A^2$$

$$V_c = -L \frac{dI}{dt}$$

$$V_c = \frac{\sigma}{\epsilon} = \frac{1}{\epsilon} \int \rho dt$$

$$x^2 + y^2 + z^2 = c^2 t^2$$

$$x' = \frac{x - vt}{(1 - v^2/c^2)^{1/2}}$$

$$E = \frac{Mc^2}{(1 - v^2/c^2)^{1/2}}$$

$$E^2 = p^2 c^2 + M^2 c^4$$

$$= Mc^2 \left[1 + \left(\frac{p^2}{M^2 c^2} \right) \right]$$

$$\Delta t' = \Delta \tau = \left(1 - \frac{v^2}{c^2} \right)^{1/2} \Delta \tau$$

$$\frac{\Delta p_x}{\Delta t} = \left(1 - \frac{v^2}{c^2} \right)^{1/2} \frac{\Delta p_x'}{\Delta t'} = \left(1 - \frac{v^2}{c^2} \right)^{1/2} \frac{\Delta p_x'}{\Delta \tau}$$

$$dp_x = \left(1 - \frac{v^2}{c^2} \right)^{1/2} dp_x', \quad dp_x = \left(1 - \frac{v^2}{c^2} \right)^{1/2} dp_x'$$



Dr. AJIT KUMAR

B. Sc. Hon. (Patna University, 1995), M. Sc. (Mumbai University, 1997)

Ph. D. (Mumbai University, 2002)

**Professor and Head,
Department of Mathematics**

SUBJECTS TAUGHT:

UG: Applied Mathematics I, II and IV, Computer Programming

PG: Applied Linear Algebra, Advance Calculus, Numerical Methods, Computer Programming, Software Lab – I and II Optimization Techniques

RESEARCH INTERESTS:

Optimization Techniques, Data Analysis, Mathematical Pedagogy

Recognized Research guide for Ph.D. (Sci.) in Mathematics

Ph. D. Guided: 02

On Going Ph.D. students: 04

Masters Projects Guided: 26

TOTAL RESEARCH PUBLICATIONS:

National: 02, International: 13

Books Published: 05

Book Chapters: 06

Dr. AMIYA R. BHOWMICK

B.Sc. (University of Calcutta, 2006), M.Sc. (IIT Bombay, 2008)

Ph.D. (University of Calcutta, 2015)

Assistant Professor of Mathematics

SUBJECTS TAUGHT:

UG: Applied Mathematics I, Applied Mathematics II, Engineering Application of Computer

PG: Probability Theory, Machine Learning, Applied Statistics-I, II, III, Mathematical Biology, Stochastic Process, Software Lab.

RESEARCH INTERESTS:

Statistics and Machine Learning methods in Ecology, Species distribution models, Statistical inference on growth curve models

Recognized Research Guide for Ph.D. (Sci.) in Mathematics

Guided students: On Going Ph.D.: 04, Masters: 22

TOTAL RESEARCH PUBLICATIONS:

National: 2, International: 32,

Conference Proceedings: 2

Citations: 457; H-Index: 14





Dr. AKSHAY S. RANE

B.Sc. (University of Mumbai, 2005), M.Sc. (University of Mumbai, 2007), Ph.D. (IIT Bombay, 2013)

UGC Assistant Professor

SUBJECTS TAUGHT:

UG: Applied Mathematics – I, II and III, Engineering Application of Computer.

PG: Advanced Calculus, Applied Functional Analysis, Complex Analysis and Mathematical methods, Differential Equations, Applied Linear Algebra, Advanced Real Analysis, Partial Differential Equations

RESEARCH INTERESTS:

Numerical Functional Analysis especially Spectral Approximation of Integral operators, Assymmetric functional Analysis, Operator Theory

Recognized Research guide for Ph.D. (Sci.) in Mathematics

Guided students: Masters: 13 , Ongoing PhD. : 1

Total Research Publications: International: 9

Citations: 23; H-Index: 1

Dr. Vikram Aithal

Education: B. Sc (University of Mumbai, 2001),

M. Sc. (University of Mumbai, 2003),

Ph. D. (IIT Bombay, 2010).

SUBJECTS TAUGHT:

Topology, Complex Analysis, Real Analysis I, Real Analysis II, Functional Analysis, Number Theory, Cryptography

RESEARCH INTERESTS:

Differential Geometry, Geometric Topology.

Total Publications: International - 2.

Guided Students: Masters Projects - 3.





Department of PHYSICS



DR. MOHAN NARAYAN

B.Sc., M.Sc., Ph.D.

Professor of Physics

Head of the Department



Dr. MOHAN NARAYAN

B.Sc.(Mumbai, 1988), M.Sc.(Mumbai, 1990), Ph.D.(Madras, 1999)

Professor of Physics

Head of the Department

SUBJECTS TAUGHT:

PG – Quantum Mechanics, Classical Mechanics, Molecular Quantum Mechanics and UG Lab

RESEARCH INTERESTS:

Theoretical High Energy Physics, Chemical Engineering Thermodynamics, Molecular dynamics

Recognized Research Guide for Ph.D. (Sci.) in Physics

Guided students: Ph.D.: 01, Ongoing: 01

TOTAL RESEARCH PUBLICATIONS:

National: 03, International: 23

H-Index: 10; Citations: 361

Impact factor-range: 1.0 to 6.11

Dr. NEETU JHA

B.Sc. (Calcutta Univ, 2002), M.Sc. (BHU, 2004), Ph.D. (IIT-Madras, 2009)

UGC-FRP Assistant Professor



SUBJECTS TAUGHT:

Nanoscience and Technology, Introduction to Nanoscience, UG Physics Lab

RESEARCH INTERESTS:

Carbon Nanomaterials, Supercapacitors, Fuel Cell Electrocatalyst, Capacitive Desalination, Photothermal materials.

Recognized Research Guide for Ph.D. (Sci.) and Ph.D. (Tech.): Physics and Green Technology

Guided students:

Ph.D. : 02, Masters: 06

TOTAL RESEARCH PUBLICATIONS :

National : 02 International : 46

H-Index: 15; Citations: 1092

Patents (granted in last 5 years): 01

AWARDS (last 5 years):

DST Young Scientist Award 2013; DST Inspire Faculty Award 2012; BRNS Young Scientist Research Award 2014.



PROF. R. R. DESHMUKH

*B.Sc. (Pune, 1991), M.Sc. (N. M. U. Jalgaon, 1994),
B.Ed. (Mumbai, 1995) Ph.D. (Mumbai, 2002)*

Registrar of ICT and Professor of Physics

SUBJECTS TAUGHT:

Solid State Physics, Electricity and Magnetism, Analytical Techniques (PG).

RESEARCH INTERESTS:

Plasma Technology, Polymer Physics, Functionalisation of nanoparticles, Molecular tailoring of surfaces using plasma for biomedical applications, textile physics, Electro-optical properties of Polymer Dispersed Liquid Crystals, Polymer nanocomposite materials

Recognized Research Guide for Ph.D. (Sci) in Physics, Chemistry

Guided students: Ph.D.: Guided : 08, Ongoing : 05

Post Doc Fellow: 1, Masters: 02

TOTAL RESEARCH PUBLICATIONS:

National: 05, International: 125

Book Chapter-10, Citations: 4050

H index: 38, i10 index: 85

Highest Impact Factor: 13, Cumulative Impact Factor: 3.64

Dr. ASHWIN MOHAN

B.Sc. (Mumbai, 2007), M.Sc. (Mumbai, 2009), Ph.D. (Germany, 2014)

**Associate Dean, IQA
Assistant Professor of Physics**

SUBJECTS TAUGHT:

Quantum Mechanics, Optics, Color Physics (UG) and General Physics (PG) Laboratory

RESEARCH INTERESTS:

Materials Physics, Quantum Magnetism, Thermal Transport, Crystal Growth

Recognized Research Guide for Ph.D. (Sci) in Physics

TOTAL RESEARCH PUBLICATIONS:

National:1 International: 13

h-Index: 5, Citations: 86





Dr. PARESH H. SALAME

M.Sc. (Condensed Matter Physics, 2005), Ph.D. (IIT Bombay, 2014)

Assistant Professor in Physics

SUBJECTS TAUGHT:

Introduction to Ceramics (PG), Analytical Techniques (PG), Polymer I and II (PG), FY BTech Lab (UG), General Physics Lab (UG).

RESEARCH INTERESTS:

Rechargeable Secondary Batteries (Na-ion batteries), Supercapacitors, Colossal Dielectric Materials, Multiferroic Materials, Electro-ceramics, Polymer Nanocomposites

Recognized Research Guide for Ph.D. (Sci) in Physics

Guided students: PhD ongoing 1:

Masters: 3 completed 2 ongoing

TOTAL RESEARCH PUBLICATIONS:

International: 13, h-Index: 05, Citations: 169

Edited book: 01, Book chapters: 05, Publications: 13

Dr. ARCHANA S. KALEKAR

M.Sc. Ph.D. (Physics)

Assistant Professor in Physics

SUBJECTS TAUGHT:

Material Science, Material Synthesis, and Applied Physics.

RESEARCH INTERESTS:

Photovoltaics, Quantum Dot Sensitized Solar Cells (QDSSC), Photocatalytic Hydrogen generation, Photocatalytic dye degradation, Gas Sensors Supercapacitors, Chemical synthesis of semiconductor nanostructures.

Recognized Research Guide for

Ph.D. (Sci) in Physics

Guided students: Ph.D.: 2 (Ongoing)

Masters: 04

TOTAL RESEARCH PUBLICATIONS:

National: 00, International: 34

h-Index: 18 Citations: 922

Total publications 38





INSTITUTE OF CHEMICAL TECHNOLOGY
(DEEMED UNIVERSITY UNDER SECTION - 3 OF UGC ACT - 1956)

स्थापन तंत्रिका

551



PROF. SAMIR KULKARNI

*Bachelor of Pharmacy,
M.Sc.(Tech): Bioprocess Technology - ICT
Ph.D.(Tech) Chemical Engineering -ICT
Executive Management: IIM Bangalore
Tata Chemicals Darbari Sheth
Distinguished Professor*

**Head: Department of Biological
Sciences and Biotechnology**





PROF. SAMIR KULKARNI

*Bachelor of Pharmacy,
M.Sc. (Tech): Bioprocess Technology - ICT
Ph.D. (Tech) Chemical Engineering
Executive Management: IIM Bangalore*

Tata Chemicals Darbari Sheth Distinguished Professor
Head: Department of Biological Sciences and Biotechnology

RESEARCH INTERESTS:

Biopharmaceutical Product Development, Biosimilars Development, Cell-Line Development, Processing and Analysis.

biomarkers for Oncology and Inflammation, Biofuels, Biosensors, Biofertilizers, Nano-Biotechnology.

Recognized Research guide for Ph.D. (Sci.) in Biotechnology, Ph.D. (Tech.) in Bioprocess Technology, Masters in bioprocess technology

Guest Lecturer: IIM Bangalore (Pharma and Biopharma Business Management)

Patents: 13

Therapeutic Protein Products Launched in different Markets: 4 MAbs, 2 Hormonal Proteins, 4 Other Recombinant Proteins

SUBJECTS TAUGHT:

Biological Sciences and Biotechnology, Industrial Practices for Biopharmaceutical Processing and Analysis. Commercial Biosimilars Development

DR. RATNESH JAIN

M.Pharm, Ph.D (Tech) Pharmaceutics

Associate Professor

SUBJECTS TAUGHT:

Biopharmaceutical Engineering, Introduction to Biopharmaceutical Manufacturing, Bioprocess technology, Research Methodology

RESEARCH INTERESTS:

Characterization of Proteins, biologics and biosimilars, Cell Culture engineering, Continuous process for polymeric/metal nanoparticles synthesis; Synthesis and evaluation of biomaterials (Biodegradable polymers, proteins and nucleic acids) for biomedical and industrial applications; Material-Protein Interactions.

RECOGNIZED RESEARCH GUIDE FOR Ph.D.

(Tech./Sci.) and Masters in Bioprocess Technology, Pharmaceutics, Green Technology

Guided students: Ph. D 9 (Ongoing) Masters 5 (Ongoing)

TOTAL RESEARCH PUBLICATIONS:

International: 95, Patents: 5





DR. ANIKETKUMAR K. GADE

B.Sc. (Microbiology), M.Sc. (Biotechnology),
P.G. Diploma in Bioinformatics, Ph.D. Biotechnology

ASSOCIATE PROFESSOR

SUBJECTS TAUGHT:

Biological Sciences, Pharmaceutical Biotechnology,
Bioprocess and Biosystem Engineering.

RESEARCH INTERESTS:

Biogenic synthesis of metal nanoparticles and their role as antimicrobial agent and development of nano-based products like nanogels, nanoemulsions, nanocrems, nano-based agriculture products like nano-fungicides, nano-fertilizers, etc. Nanoparticle Functionalization

Recognized Research guide for Ph.D. (Sci.) in Biotechnology

Guided students: Ph. D (Guided) – 1, Ph.D. (Ongoing) –3,

M.Sc. (Project) – 32

Total Research Publications: 89; National: 7; International: 82,
Patents (granted in last 5 years): National: 2

Dr. GUNJAN PRAKASH

M.Sc., Ph.D

Associate Professor

SUBJECTS TAUGHT:

Fermentation and Cell Culture, Fundamentals of Food biotechnology, Genetics, and Cell Culture Technology, Microbiology, Pharmaceutical Biotechnology.

RESEARCH INTERESTS:

Algal Biotechnology, Molecular and synthetic biology of microalgae for Biofuels and High-value Chemicals (Algal Protein, Pigments, Prebiotics) Production,, Nuclear and Chloroplast Engineering, Diatom Biotechnology, Microbial Fermentation for bio-based Chemicals, Plant Biotechnology, Plant Secondary Metabolites Production

Recognized Research guide for: Ph.D (Sci.) Biotechnology, Ph.D (Tech) Bioprocess Technology, M.Tech Bioprocess Technology, M.Tech Food biotechnology

Guided students: Ph.D.: Guided 8, Ongoing 4, M. Tech: Guided 13; Ongoing 6

Total Research Publications: National: 2, International: 31 Patents: Filed-1



Dr. MANJU SHARMA

B.Sc. Biosciences; M.Sc. Microbiology; Ph.D Microbiology

Assistant Professor



SUBJECTS TAUGHT:

General Microbiology & Food Microbiology

RESEARCH INTERESTS:

Waste Valorization: waste to fuel and biobased chemicals, biomass to biogas, Anaerobic/ aerobic fermentation for biobased chemicals, Fermentation of algal biomass for bioactives and value added chemicals, Consortium design & microbiome studies, bioprospecting of industrially important microbes, Thermophilic enzymes, Industrial Microbiology and Microbial biotechnology

Recognized Research guide for Ph.D Biotechnology (Sci.) and M. Tech. Bioprocess Technology

Guided students: Ph.D: 1, Co-guided 2,

Masters: 2 (Co-guided)

Ph. D (Ongoing): 2, M. Tech (Ongoing) – 4

Total Research Publications:

International: 12, Patents: 1



Dr. HITESH PAWAR

M.Sc. (Organic Chemistry), Ph.D. (Science) Chemistry

Assistant Professor

SUBJECTS TAUGHT:

Analytical techniques in bioprocessing, Unit Operation (M. Tech bioprocess Technology), Organic chemistry, Stereochemistry of organic compound, Pharmaceutical organic chemistry.

RESEARCH INTERESTS:

Conversion of bio-based sugars to value added chemicals, Photocatalytic hydrogen production, Novel homogeneous, heterogeneous and transition metal catalysis, Synthesis of ionic liquids, deep eutectic solvents, Study of reaction kinetics and reaction mechanism, Designing and development of industrial catalyst, Process intensification and integration, Process development, characterization and scale –up, Chromatographic separation and purification of small molecules, Computational chemistry and molecular modeling Effluent treatment.

Recognized Research guide for M Tech. Bioprocess Technology, Ph.D. (Chemistry) (Tech.) and M Tech. bioprocess Technology, Ph.D. (Chemistry)

Guided students: Ph. D guided 2, Ongoing 2,

Masters guided 4, Ongoing 3

Total Research Publications: International: 25,

Patents: 10



Dr. SHAMLAN M. S. RESHAMWALA

B.Sc. (Microbiology and Biochemistry), M.Sc. (Biochemistry), Ph.D. (Molecular Biology)

Assistant Professor



SUBJECT TAUGHT:

Bioprocess and Biosystems Engineering, Applied Molecular and Synthetic Biology, Molecular Biology and Biotechnology, Basics of Biology and Application to Technology, Intellectual Property Rights, Design and Analysis of Experiments, Research and Publication Ethics.

RESEARCH INTERESTS:

Molecular and synthetic biology, recombinant protein expression in prokaryotic and eukaryotic host cells, enzyme engineering for improved catalysis and robustness, metabolic and pathway engineering to design novel biosynthetic routes for high-value chemicals, valorization of abundant feedstocks, bioprospecting to explore metabolic diversity, science communication and pedagogy, IP policy

Total Research Publications: International: 16, Patents: Granted-1, Filed -3



MR. DEEPAK SARMA

M.Tech. (BPT), LLB

RESEARCH SCIENTIST

Intellectual Property management & Technology Commercialization unit)

SUBJECTS TAUGHT:

Intellectual Property Rights

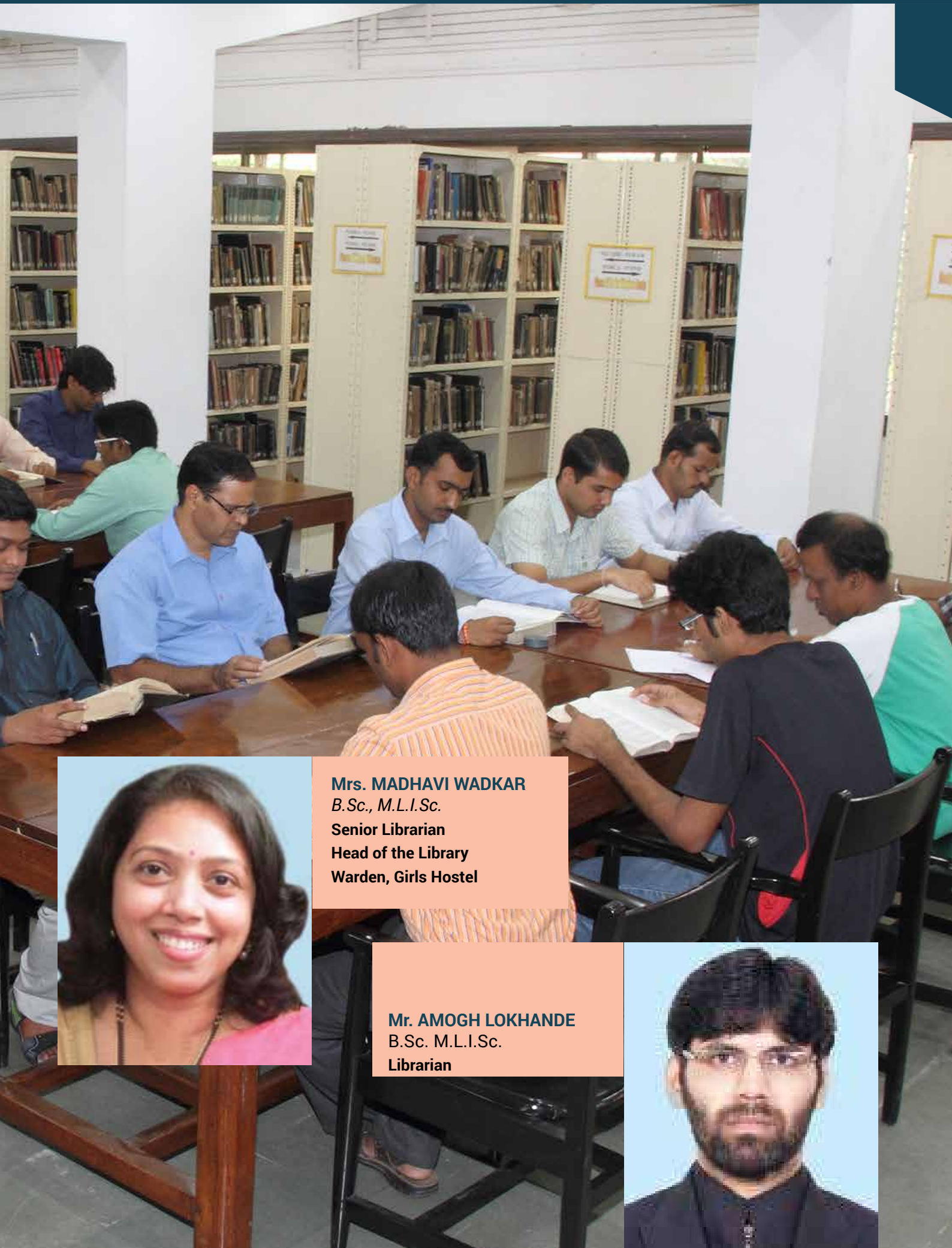
RESEARCH INTEREST:

Drafting, reviewing and executing various strategic agreements (MoU, MoA, NDA, MTA etc.), Technology licensing and transfer, Prior art searches for patentability of Inventions, Preparing IP reports, Interviewing the inventors, Patent drafting, filing and Prosecution, Handling of various IP such as Design, Trademark, Copyright, Managing Patent portfolio, Documents for Institutional and administration and financial audits.





PROFESSOR M.M. SHARMA LIBRARY



Mrs. MADHAVI WADKAR
B.Sc., M.L.I.Sc.
Senior Librarian
Head of the Library
Warden, Girls Hostel

Mr. AMOGH LOKHANDE
B.Sc. M.L.I.Sc.
Librarian







PROFILE OF DEPARTMENTS AND CENTRES OF EXCELLENCE

Masters
of the
Nano Age

DEPARTMENT OF CHEMICAL ENGINEERING



VISION :

We will strive to be a vibrant department, with continuously evolving curricula and programmes that will charter the future of chemical, biological, materials and energy industries of the nation and be on par with the very best in the world through the participation and scholarship of our faculty, and students who will be torch bearers in education and research and have great impact in solving societal needs for the benefit of mankind at large.

MISSION :

We will create an atmosphere conducive to generate new knowledge at every opportunity for our students at large. Our education will enable new chemical engineering solutions to meet the need of all segments of society with regard to material and energy, while protecting the environment and conserving the natural resources. Our endeavors will enhance the public welfare. Our activities will not be limited to class-rooms but will extend to a greater multi and cross disciplinary platform to conduct research, discovery, technology development, service to industry and entrepreneurship in consonance with India's aspiration to be a welfare state. We will team chemical engineers with professionals in other disciplines to arrive at better solutions. We will provide all students with a strong foundation in chemical engineering and applied sciences to encourage them to be our ambassadors at national and international level, in whatever professional activity they undertake to serve the society. Through our vision, we will serve the chemical engineering profession and society and strive to reach the summit as a team and stake-holders and as role models to the younger generation.

What is Chemical Engineering?

Chemical engineering is one of the most versatile branch of engineering that applies scientific and mathematical principles to design and develop processes by which available chemicals can be converted into a variety of useful products. Chemical Engineering is applicable to a wide range of technologies, including the production of energy, materials, electronics, and pharmaceuticals, the processing of food, and environmental protection as well as remediation. The development of high quality materials, products and large scale processes is the testimony

of an industrialized nation and every nation tries to build its foundation on the strong pillars of Chemical Engineering profession which cuts across several chartered and unchartered territories of human civilization. Thus Chemical engineering is practised from nano scale to mega scale, from food / pharma to nuclear engineering from mineral/ mining to silicon (high purity grade). The subjects of energy, environment and sustainability are very much integral part of Chemical Engineering as Chemical engineering fundamentals are used to solve problems related to pollution, hunger and sustainable living (housing and modern farming).

MODERN CHEMICAL ENGINEERING

The modern discipline of chemical engineering encompasses much more than just process engineering. Chemical Engineering is highly science based discipline and is the most versatile and accommodative branch of engineering among all. Chemical Engineering work on scales from atom to atmosphere and are involved in all possible human activities which process materials and energy. Human body is the best example of applications of principles of Chemical Engineering. Kitchen uses all sorts of unit operations familiar to Chemical Engineering. All transport phenomena are unified due to Chemical Engineering. Chemical engineers are now engaged in the development and production of a diverse range of products, as well as in commodity and specialty chemicals. These products include high performance materials needed for aerospace, automotive, biomedical, electronic, environmental, and space and military applications. Examples include ultra-strong fibres, fabrics, adhesives and composites for vehicles, bio-compatible materials for implants and prosthetics, gels for medical applications, pharmaceuticals, and films with special dielectric, optical, or spectroscopic properties for opto-electronic devices. Additionally, chemical engineering is often intertwined with biology and biomedical engineering. Many chemical engineers work on biological projects such as understanding biopolymers (proteins) and mapping the human genome.

A new paradigm of “borderless chemical engineering science” is emerging. The demands from the society on ‘cleaner’ technologies rather ‘clean-up’ technologies, the emergence of ‘performance chemicals and materials,’ etc., is driving the profession towards achieving a symbiotic relationship



with other disciplines. It has always been dealing with pollution prevention, atom economy, recycle, as the Solvay process would suggest. The term 'green chemical engineering' as a mantra for sustainable development and responsible care is at the centre-stage for all activities related to chemical engineering. Future course of an engineering discipline is reflected in current research areas within its folds. The expedition ahead for Chemical Engineering, based on the research profile of Chemical Engineering schools world over suggests that it is embracing biology, bio-engineering, tissue engineering, bio-processing, green chemistry and green engineering, and material science and nanotechnology in a big way and has been a truly working on scales from atom to atmosphere. Readily available computing power is changing the nature of research activity forever. A high level of mathematics and computational methods are intertwined with chemical engineering. The advent of new measurement techniques is reducing the length scale of investigation to nano and molecular scales irreversibly in many cases. Chemical Engineering thus appears poised for a major expansion. Chemical engineers are getting directly involved in development of new products and new technologies which improve the quality of life which requires highly interdisciplinary work, new ways of treating diseases-a domain of medical practitioners only till very recently, and development of application specific materials and fluids with complex structure at various length scales.

Chemical Engineering is not just Chemistry but a discipline itself with own characteristics. A proficiency in basic sciences such as Chemistry, Physics, Biology, Mathematics and their applications is necessary to effectively conduct the molecular transformations at scales varying from thousands of tonnes to few kilograms per day in economically attractive and environmentally safe manner. Each reaction with unique characteristics gives challenging

Department of Chemical Engineering Upgradation of CE Lab & Safety Audit



Through the generous donation of Batch of 1968, Chem Engg lab has been upgraded. Safety Audit was conducted in various laboratories in Chem. Engg. Dept. on Dec 13, 2019 by Mr. Nilesh Vani, Safety Officer and Dr. Hubert Fernandes, Head R&D, Fevicol Adhesives, Pidilite Industries

opportunities to conduct it at profitable scale to produce increasingly purer products as per market demands with minimum energy input in shortest time without producing waste or by-products. Each combination of Reaction and Reactor is, therefore, a challenge to the Chemical engineer to make it faster, simpler and cheaper.

Borderless and Versatile Engineering Profession

Over the few decades, Chemical Engineering has evolved developing interfaces with newer areas, including Biochemical Engineering, Nano Technology, and Energy Engineering taking advantage of developments in High performance computations, Electronics and Instrumentations and Information Processing. Although the basic responsibility of a Chemical engineer remains in design, testing, scale-up, operation and control of chemical plants, the interface helps the Chemical Engineers to enter into these newer areas at ease. Large Manufacturing facilities such as cements, petroleum refineries, oil and natural gas exploration and semiconductor Industries, biofuels and biotransformations, nuclear reactors, all involve Chemical engineering operations. Chemical engineers find good job opportunities in a wide spectrum of industries involving speciality chemicals, pharmaceuticals, drugs, polymers, textiles, paints, dyes, vegetable oils and foods.

Because of excellent analytical skills Chemical Engineers(CE) can work in areas from chemoinformatics to bioinformatics, drug delivery systems, molecular modelling, to handling systems from nanoscales to global scales for environmental impact and climate change. The versatility of Chemical Engineering education, therefore, makes a wide choice of career options available to the CE candidates. There is a huge scope for higher studies in Chemical Engineering because of highly science based discipline and requirement of RandD in the country. All B.Tech. courses in ICT have much wider base in Chemical Engineering including subjects like Material and Energy Balance, Separation Processes, Heat and Mass Transfer, Chemical Reaction Engineering, Thermodynamics, Process Control, Chemical Process Industries, Chemical Process Economics. Consequently, at Masters level ICT B.Tech. students from all specialisation are accepted for admissions in Western Universities and within ICT itself.

The Integrated Master of Technology with a major in Chemical Engineering and minor in other branches was thus conceived which also includes trimester system and two year's industrial/research internship. These innovative programmes will be offered at the IOC Bhubaneswar and Marathwada Campus at Jalna.

International Standing of Department

The Department of Chemical Engineering is the number one Chemical Engineering Department in the Country by all the standards: teaching, research and industrial relationship, as has been rated by the international surveys conducted by Professor Jude Sommerfield of Georgia Tech., USA since 1964 for every five year period as well as every year and also during the 5-year period during 2014 which included all IITs and IISc. Besides it is among top 10 Departments in the world and in terms of productivity as measured by papers per faculty per dollar spent, it is number one in the world. The number of papers published in peer reviewed journals per faculty is also the highest in India. The FIST programme of DST has revealed that the Chemical Engineering Department is the Best Department in all engineering Departments in India.

This is again the record which has been held due to the research contributions of faculty in international journals of repute. The value and impact of our research is reflected in highest number of papers per faculty member, highest impact factor per paper, and highest number of citations for papers of Chemical Engineering Department. The Department is recognized as the UGC Centre for Advanced Studies for a record time since 1989 and as UGC Networking Resource Centre in Chemical Engineering, since 2008; only one of its kind and further supported by DST-FIST programme with state-of-the-art research facilities.

The faculty has been acting as consultants to industry and the earnings are the highest for any engineering Department in India.

Connectivity with Industry

Collaborative Academic Programs have been initiated with international institutes such as Purdue University, Kansas University, University of Saskatchewan, ICGEB, and, CSIR labs. Many foreign universities have shown interest in collaborating with Chemical Engineering faculty, and the most striking is a string of Canadian Universities desirous of signing MOUs with this Department. The dual Ph.D. degree programme in Chemical Engineering with Michigan State University, USA is the highlight of this year.

Accolades and Awards

The last three Vice-Chancellors / Directors of ICT have been bestowed upon with Padma awards with Prof. Yadav being awarded Padmashree in Jan' 16. Two former Directors of CSIR labs are currently Distinguished Professors in Chemical Engineering Department which is also unique. A number of awards have come to the faculty members in Chemical Engineering including Jagdish Chandra Bose National Fellowship, fellowships of Indian National Science Academy, Indian Academy of Sciences, National Academy of Sciences in India, Indian National Academy of Engineering and Indian Institute of Chemical Engineers. Not only faculty members but students also have bagged a number of awards. Even home paper or design papers of the final year students have been repeatedly rated as the best by the Indian Institute of Chemical Engineers and the Ambuja Cement and Sir P. C. Ray Awards have come several times to ICT which itself is a record. All these awards recognize excellence in the field of Chemical Engineering. The ICT has also received the award for being 'The Best Industry Related Institute in Chemical Engineering' from the confederation of Indian Industries and the All India Institute of Technical Education.

Employment Opportunities

Our graduates, numbering over 30-35 per year are accepted with full fellowships in leading universities including MIT, Minnesota, UCB, Caltech, Wisconsin-Madison, Princeton, Stanford, Texas A and M, University of Texas, University of Delaware, Purdue University, and many more. All students are placed in some of the leading industries in India, with salaries ranging from Rs. 3.5 lakhs to Rs. 15.5 lakhs per annum and these are hard core industries and not the software companies. Several leading industrialists and owners of fortune-500 company owners are our graduates, including top planners and policy makers, who have been bestowed with Padma awards.

Research Interests of Faculty

The Chemical Engineering faculty has been well known for their publications in peer reviewed high impact factor journals, patents and industrial consultations in a variety of research interests. Major Thrust of Research Areas : Development of Novel Reactors, Reactions and Separation Processes Analysis of Multiphase Phenomena, Computational Fluid Dynamics for Multiphase Systems, Novel Catalytic Materials and Processes, Surfactant Science and Hydrotrophy, Organic Chemical Processes Development, Biotechnology and Downstream Processing, Adsorptive and Chromatographic Separations, Green Chemistry, Engineering and Technology, Cavitation Phenomena, Sonochemistry, Membrane Based Separation Processes, Bio-Technology and Bio-medicines, Environmental Protection and Safety, Nanoscience and Nano-Technology, Nano Technology, Materials Technology

In the global context, the priority research areas as identified by the Chemical Engineering Department are:

Multiphase reactions, multiphase reactors and separation processes

Energy engineering with an emphasis on the renewable energy resource

Laboratory and Research Facilities

All Chemical Engineering laboratories and faculty offices have been remodeled during past 5 years. The labs are equipped with state-of-the-art instruments and have gone a total face-lift. UG students are provided computational facility in the main laboratory, including latest software required for modeling and simulation. Some of the sophisticated equipment which have been

acquired and used continuously are: GC-MS, LC-MS, SEM, TEM, AFM, IC, FTIR, HP-TLC, HPLC, GC, XRD, DSC, DTA/TGA, AAS, Laser-Doppler anemometer, image analysers, pore and particle size analysers, autoclaves of different sizes and MOCs, catalyst screening bench-top autoclave assembly, supercritical fluid phase monitor and reactor, microwave reactors, computer workstations, laminar flow apparatus, fermenters, and many others. Advanced instrumental facilities have been created under industry sponsored projects as well. The new campuses will also be provided with sophisticated instrumental facilities including Ph.D. fellowships.

Fellowships

Twenty Ph.D. fellowships under ICT-DAE Centre for Chemical Engineering Education and Research. Several projects are secured by the faculty in the areas of expertise from central agencies such as DST, DBT, CSIR, including Indian and foreign companies; this number varies from year to year. Interested candidates must appear for the entrance examination for a Ph.D. degree, whether funded government or industry. For GATE qualified students fellowships are offered at the UGC rate and others as per the provision of the funding. No student is admitted to any Ph.D. programme.

Apart from Master of Chemical Engineering programme, the department also participates in two interdisciplinary M.Tech. courses - Perfume and Flavour Technology, Green Technology and Bioprocess Technology. At least 19 Masters fellowships offered for GATE qualified students in the first round and typically this number is around 30+ when the admissions are closed. Besides, about 10-15 M. Tech. students in Bioprocess Technology (with a special reference to downstream processing), Food Biotechnology, Pharmaceutical Biotechnology, Perfumery and Flavour Technology work under the guidance of Chemical Engineering faculty.

Interdisciplinary and Cross Disciplinary Programmes

Several faculty members guide Ph.D. students in all disciplines of Chemistry and Biotechnology, as well as in all branches of Chemical Technology on inter-disciplinary topics and several chemistry graduates have benefitted by their training in the Department of Chemical Engineering.

Visiting Faculty Endowments

There are several endowments created to invite the best of professionals and academics to the ICT. Some eminent faculty from institutes such as MIT, Purdue, Cambridge, Monash University, University of California, Berkeley, University of California, Santa Barbara, National University of Singapore, Montreal, University of Michigan, Michigan State University, University of Alberta,



RMIT Australia, IIT-Chicago, Cambridge University, University of Manchester, IIT-Bombay, IIT-Kanpur, IIT-Madras, National Chemical Laboratory, have taught UG and PG courses in ICT under these endowments.

These lectures form part of audit courses for research students. Besides, public lectures are organized under each endowment.

HOMI SETHNA ICT-DAE CENTRE FOR CHEMICAL ENGINEERING EDUCATION AND RESEARCH

Preamble:

The Institute of Chemical Technology (ICT) and the Department of Atomic Energy (DAE) signed a Memorandum of Agreement (MOA) in 2006 having far reaching benefits for Indian S and T, which was based on the excellent relation between these two organizations and successful completion of projects by ICT faculty of Chemical Engineering. The MOU covers the following activities.

- (A) Instituting an interdisciplinary Ph.D. programme in Chemical Engineering.
- (B) Undertaking RandD projects in the areas of common interests and related to nuclear fuel cycle and advanced technologies.

DAE Research Institutions, namely, Bhabha Atomic Research Centre (BARC) and Indira Gandhi Centre of Atomic Research (IGCAR) are premier multidisciplinary RandD organizations engaged in research with the objective of generating knowledge and techniques for nuclear power production, advancement of science, use of radioisotopes in industry, health and agriculture as well as research in frontier areas of science and technology. BARC and IGCAR have multi-disciplinary groups of experts who have contributed to the development of processes and technologies related to thermal and fast nuclear reactors, fuel cycle and related areas. BARC and IGCAR have pursued research and development in chemical engineering in a rigorous way for many years in the areas defined by DAE's mission oriented programmes as well as projects of national interest. BARC and IGCAR support academic programmes within the DAE and also in the academic institutions and research centres in various parts of the country.

ICT is one of the foremost academic institutions in India, and has the necessary infrastructure in terms of trained manpower (including students) and a long tradition of research and development in Chemical Engineering and Chemical Technology. ICT has also had long and fruitful experience of working with BARC and other units of DAE on research projects related to Chemical Engineering and process technologies and have completed them meeting the high standards expected by DAE. On the national level, ICT is a major resource Institution in terms of technology development and fundamental research at the cutting age on the global scale. They have also entered into an MoU with Homi Bhabha National Institute (HBNI) for collaborating on academic programs especially suited to the requirements of DAE institutions.

In the Xth and XIth Five Year Plan, BARC and ICT had undertaken a joint research programme encompassing several DAE research projects in the Chemical Engineering field. Through the Virtual Centre, called, DAE-ICT Centre for Knowledge Based Engineering, BARC scientists and ICT faculty have collaborated and very successfully completed several projects. In view of the success of the collaborative programme through the Centre for Knowledge Based Engineering, BARC and IGCAR proposed to enlarge the scope of collaboration by establishing the DAE-ICT Centre for Chemical Engineering Education and Research that will synergise the strengths of both these organisations. On the one hand, ICT has proven track record in training high quality manpower and in conducting research in Chemical Engineering and technology, on the other hand BARC and IGCAR have demonstrated over decades their ability to conduct multi-disciplinary, mission oriented RandD leading to a large number of indigenous and innovative chemical engineering processes, equipment and instruments, and technologies.

DAE has to develop several innovative technologies to tackle the problems of efficient nuclear fuel utilisation in the second and third stages of nuclear power programme. This requires a pool of qualified, motivated and talented young research scientists with multidisciplinary expertise. The number of Ph.D. level chemical engineers is small in this country and the number of chemical engineers entering DAE is even less. Thus, the number of Ph.D. scholars working on energy related programmes needs to be increased. Further, these scientists need to have wider knowledge of both basic sciences and allied engineering subjects besides chemical engineering, which is essential for the development of innovative technologies. However, the present education system imparts expertise only in selected areas. To satisfy the need of greater number of Ph.D. scholars well versed in basic sciences and chemical engineering, DAE and ICT wish to take an initiative for imparting doctoral education in chemical engineering with multidisciplinary character.

Scope of Collaboration

1. To provide doctoral degrees to promising candidates with talent and aptitude for carrying out advanced research and development activities in science and technology.
2. To furnish a multidisciplinary, flexible and innovative Ph.D. research programme in Chemical Engineering with special emphasis on :
 - (a) Acquisition of proficiency in research, knowledge, data generation and analysis, mathematical modeling, and management with sharpening skills in innovative experimental methods and problem-solving capabilities;
 - (b) Creation of a pool of young talented, dedicated and committed individuals with passion and involvement in pursuing research and development as a career;
 - (c) Inculcation of attitude, temper, and outlook for developing social commitment as well as high level of scientific ethics and integrity.
3. To evolve a symbiotic relationship between the ICT and DAE Institutions in such a way that it enables the Collaborative Programme to grow and develop, and in turn ensures that research projects of relevance to the objectives of DAE research institutions are integrated with creative and innovative content.
4. To select students on the basis of an all-India test and subsequent interview jointly conducted by ICT and BARC/IGCAR.
5. To promote effective linkages on a continuing basis between ICT, BARC and IGCAR and the Industry for joint research projects and training programmes and other academic activities related to these Institutes. The expertise and experience so gained shall be shared with other Universities in the country at large.
6. To disseminate the new knowledge in the form of publications, theses, seminars and conferences.

Ph. D. Programme in Chemical Engineering

Induction of Students

It is proposed to introduce a Ph.D. programme with an initial intake of about 20 students per year, drawn from Chemical Engineering, Metallurgical and Mechanical Engineering disciplines at the Bachelors and Masters Levels, and also from Chemistry, Physics and Mathematics streams with Masters degree. The Masters Degree holders in Engineering will have to spend a minimum duration of 3 years, the Bachelors degree holder in Engineering 4 years and M.Sc. degree holder in science stream 5 years for earning the Ph.D. degree. The students will be selected on the basis of all India written test and interview conducted jointly by ICT and DAE.

Course Work, In-Plant Training and Research

a) Course Work

The proposed curriculum will have a fine balance of basic and engineering sciences. The curriculum will contain adequate fundamental and core courses to equip the students adequately to make them practising chemical engineers, as enumerated below. At the same time, they will have a background for starting independent research career.

Areas of teaching and research

- | | |
|--------------------------|--------------------------------------|
| (a) Chemical Engineering | (c) Bio-technology |
| (b) Process Technology | (d) Materials Science and Technology |

Typical List of courses to be taken by the Post Graduates in Science

- (a) Material and Energy Balance Computations
- (b) Industrial and Engineering Chemistry
- (c) Generation and Transmission of Power
- (d) Electrical Engineering and Electronics
- (e) Applied Mechanics and Strength of Materials.
- (f) Momentum Transfer
- (g) Heat Transfer
- (h) Mass transfer
- (i) Unit Operations
- (j) Chemical Reaction Engineering
- (k) Engineering Graphics
- (l) Project Engineering Management and Economics
- (m) Biochemical Engineering
- (n) Advanced Separation Processes
- (o) Process simulations
- (p) Materials Processing and fabrication technology
- (q) Nuclear Reactor Theory
- (r) Nuclear Chemical Engineering
- (s) Statistical Methods of Analysis
- (t) Instrumental methods of analysis
- (u) Nuclear chemistry
- (v) Radiation chemistry
- (w) Chemical Engineering Thermodynamics
- (x) Process Hazard Analysis and Safety

Typical List of courses to be taken by the Engineering Graduates/ Post Graduates

- (a) Quantum Mechanics
- (b) Structure - Property Relationships
- (c) Materials Physics and Chemistry
- (d) Advanced Chemical Engineering Thermodynamics
- (e) Nuclear Reactor Theory
- (f) Nuclear Chemical Engineering
- (g) Process simulation and optimization
- (h) Transport phenomena
- (i) Advanced Reactor Engineering
- (j) Advanced Mass Transfer

- (k) Statistical methods of analysis
- (m) Nuclear chemistry
- (n) Radiation chemistry
- (o) Process Hazard Analysis and Safety

In-Plant Training

All the students before starting Ph.D. research will undergo in plant training for a period of one to three months in the process industry. Some students will undergo training in DAE.

Research Projects

The Ph.D. scholars will take up research projects primarily defined by BARC and IGCAR. However, there will be a certain degree of flexibility for selecting research projects outside the areas of relevance to DAE. To take advantage of the excellent laboratory and library facilities at the DAE institutions, the faculty and students will be provided access to conduct experiments and use of the library and computational facilities at the DAE institutions.

COLLABORATION WITH HOMI BHABHA NATIONAL INSTITUTE

Preamble

There was a dire need to recognize the common interests of ICT and HBNI constituent institutions (CIs) in pursuit of knowledge through doctoral and master's programmes. There is a possibility of the candidates admitted in some of the CIs of HBNI may study at the ICT and carry out the projects under the joint supervision of the faculty members from the ICT and the scientists and faculty members from the CIs of HBNI. It will be mutually beneficial to have lectures by the ICT faculty members at the HBNI, and by the HBNI faculty members and scientists at the CIs of HBNI at the ICT. For the purpose of academic programmes, the following units of DAE are the Constituent Institutions (CIs) of the HBNI are included:

1. Bhabha Atomic Research Centre (BARC), Mumbai
2. Indira Gandhi Centre for Atomic Research (IGCAR), Kalpakkam
3. Raja Ramanna Centre for Advanced Technology (RRCAT), Indore
4. Variable Energy Cyclotron Centre (VECC), Kolkata
5. Saha Institute of Nuclear Physics (SINP), Kolkata
6. Institute of Plasma Research (IPR), Gandhinagar
7. Institute of Physics (IOP), Bhubaneswar
8. Harish-Chandra Research Institute (HRI), Allahabad
9. Tata Memorial Centre (TMC), Mumbai
10. Institute of Mathematical Sciences (IMSc), Chennai

The two Institutes shall recognize each other's research guides in the disciplines of common interests. The identified faculty members of each Institute may function as Honorary Professors of the other Institute and may participate in the teaching programmes of the other Institute in honorary capacity, as per the Rules of the respective institute. The Honorary professors will enjoy the library facilities of each other's institutes like regular faculty. However, a separate request must be made to avail of book-borrowing facilities. In order to share expertise, some seats may be given on priority basis to the faculty and students of the other Institute in the academic/research programmes of one Institute, which are mainly for the in-house persons and where limited access is available for persons coming from outside, such as training programmes, seminars, workshops, etc. The research facilities at one Institute should be made available to the students/scientists/faculty of the other Institute through the involvement of research supervisors or the technology advisors, as per the norms of the respective institute, as follows:

1. A student registered for a post-graduate course in one Institute shall be governed by the Rules of that Institute and will earn the credits of the course as per the prescribed norms. However, a student from one Institute will be permitted to enroll for equivalent courses in the other Institute and earn the credits by attending the courses and clearing the respective evaluation procedures, provided such courses are duly approved by the parent Institute. Thus, the two Institutes shall recognize the credits earned by the students in the institute other than the one where they are enrolled.
2. To facilitate the process of a student attending the course work in the partner Institute, the supervisor of the student in the Parent Institute shall put up a proposal (in consultation with the appropriate academic bodies of the Institute concerned) to the Dean (HBNI)/ Dean(ICT), as the case may be.
3. A research guide in one Institute may select a faculty member from a partner institute as a co-guide for guiding a Master's or doctoral student working under his/her guidance; provided such a declaration is recorded at the time of registering the student, with consents from the Heads of both the Institutes. However, collaboration among faculty of each institute, without any such formal arrangement will be within the frame-work on the MOU. This may be required for joint publications.
4. A student with a co-guide should be permitted to work in the specified laboratories of the organization to which the co-guide belongs and avail the facilities there from, and the organization should have no objection to the inclusion of the outcome of the research under this programme in the thesis of the student.
5. Any liability arising out of the work done by a student in the co-guide's organization shall be the responsibility of the co-guide and the parent Institute of the student shall not be responsible for the same.
6. Any patent emerging out of the research work under such a programme shall be with the authorship of candidate, guide, co-guide, and the parent Institute and shall be filed as per the respective ordinances, regulations and rules of the Institute.
7. In case the co-guide leaves his organization, or retires the guide may accept a co-guide from the same organization, provided the new co-guide is recognized. In case such a co-guide is not available, the entire responsibility of successful completion of the programme shall lie with the guide. If the retired person remains with the institute or with other institute of HBNI, as an emeritus scientist, he/she will be permitted to continue as co-guide till the period of his/her new assignment.
8. In addition to the recognized research supervisor, a student may be advised by a Technology Advisor, who need not be recognized Ph.D. Guide, from the other Institute. The Technology Advisor shall be a person of high repute in the area of research being pursued by the student. The Technology Advisor shall be chosen by a research guide, with consent of the Director, ICT and Director of the respective constituent Institution of the HBNI.

DEPARTMENT OF ATOMIC ENERGY (DAE) -DGFS PROGRAMME FOR M.Tech DEGREE

Institute of Chemical Technology (ICT) is one of the Institutes recognized by the Department of Atomic Energy for its DGFS programme. It is a Two-Year DAE Graduate Fellowship scheme for Engineering Graduates and Post-Graduates in Physics for joining M. Tech. in specified specializations

Qualifying Degrees and Disciplines:

B.E/ B. Tech. in Mechanical, Chemical, Metallurgical, Civil, Electrical, Electronics, Computers, Instrumentation and Engineering Physics.

OR

M. Sc. in Physics, Chemistry, Biosciences, Geology, and Geophysics.

A minimum of 60% (aggregate) of a CGPA of 7.01 in the qualifying degree is an essential requirement. Science candidates are further required to have secured a minimum of 60% (aggregate) in B.Sc. also. Screening and Selection of candidates is through a written test or on the basis of valid GATE score. Applications for the programme are to be submitted to DAE as per advertisement in National newspaper and Employment News. (for details visit website: <http://oces.hbni.ac.in>)

Qualification Criteria for Admission and Registration for Ph.D. (Tech.) in Chemical Engineering and the Course Requirements

Category	Basic Qualification for Admission	Course requirement
1	B. E. in Chemical Engineering / B. Tech. in Chemical Engineering / B. Chem., Eng. / B. Tech. in Chemical Technology (ICT) in first class or equivalent	Course work for M. Chem. Engg. (credit courses) (to be completed in 2 semesters from the date of admission) and courses related to nuclear Engineering (to be completed in 3 semesters from the date of admission) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering
2	Bachelors degree in Chemical Engineering or Chemical Technology in first class or equivalent + Course work in BARC training school	5 courses including one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 2 semesters from the date of admission)
3	Bachelors degree in Mechanical / Metallurgical Engineering (except Chemical Engineering / Technology) I first class or equivalent + Course work in BARC training school	10 courses and one Seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 4 semesters from the date of admission)
4	Masters degree in Chemical Engineering / Masters degree in Chemical Technology (ICT) in first class or equivalent	courses related to nuclear Engineering (to be completed in 2 semesters from the date of admission) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering
5	M. Tech. Degree in Chemical Engineering from HBNI + Course Work in BARC training school	Minimum number as required by UGC guidelines.
6	M. Tech. Degree in any branch of Engineering (except Chemical Engineering / Chemical Technology) from HBNI + Course Work in BARC training school	4 - 5 courses and one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 2 semesters from the date of admission)
7	M. Sc. Degree in Physics / Chemistry / Mathematics in first class or equivalent + Course work in BARC training school	8 - 10 courses and one seminar in Chemical Engineering to be decided by the supervisor and approved by the coordinator followed by PGPC. (to be completed in 4 semesters from the date of admission)

8	M.Sc. Degree in Physics / Chemistry / Mathematics in first class	14 Credit courses and one seminar in Chemical Eng. courses (to be completed in 4 semesters from the date of admission) courses are listed below in category 3.3
9	M. Sc. Degree in Physics / Chemistry / Mathematics in first class (Rank in top 3 in University)	(i) Typically 20 courses comprising of: (to be completed in 4 years from the date of admission) B. Chem. Eng. Level courses (Credit courses) Applied Mathematics - I, II and III M. E. B. C. Momentum and Mass transfer
		Energy Engineering Chemical Engineering Operations Heat Transfer Chemical Reaction Engineering Design and Analysis of Experiments M. Chem. Eng. Level Courses (Credit courses) Advanced Momentum transfer Advanced Heat Transfer Advanced Mass Transfer Advanced Reaction Engineering Thermodynamics of Phase Equilibrium Advanced Separation Processes Advanced Reactor Engineering Nuclear Engineering Level courses (courses) Nuclear and Reactor Physics Nuclear Chemical Engineering Chemistry of Radionuclides Material Science in Nuclear Engineering

UGC NETWORKING RESOURCE CENTRE IN CHEMICAL ENGINEERING

Preamble

The spectacular and consistent performance of the Department of Chemical Engineering, having been rated as number one for past several decades, including 2009-10, which has been revealed by the international surveys, has earned it much recognition, accolades and awards. Apart from the Centre of Advanced Studies, the UGC has recognized it further by awarding the first ever Networking Resource Centre in Chemical Engineering, in October 2008, to undertake following activities:

1. Research, training and skills development of the faculty and research scholars through periodic discussion, workshop and summer/winter schools
2. Capacity building by adopting faculty and Departments for augmenting their research skills and to mentor them
3. Hosting and facilitating researcher from other institutes/universities to carry out key experiments
4. Augmentation of information resource facility of the Department to provide quality research information to other institutes/researchers
5. To enhance and build state of the art in-house research infrastructure and other research facilities in the Department.

The rapidly changing face of research in chemical engineering offers new opportunities for integrating new research areas within its fold and several workshops, courses, demonstration experiments, regular experiments and seminars have been organized by the Centre. The objective of many of these activities is to acquaint the Chemical Engineering community especially from academic institutions with the emerging face of our discipline, and the how to meet the new challenges that it poses to contribute at the leading edge. The idea is also to train the academic fraternity so that overall research and development in chemical engineering is promoted. The interactive workshops also aim at initiating a dialogue on how the new face of Chemical Engineering can be used to address problems, specific to us as a growing nation. The vacation periods, long weekends and week-long programmes are undertaken which are publicized on the homepage of the institute and also communicated to all chemical engineering Departments. Not only the ICT faculty but experts from other institutes, industries, and visiting professors from foreign universities have delivered lectures and interacted with young faculty.

Rules and Guidelines for Registration of Teachers from UGC and/ Or AICTE Approved Colleges for Ph. D.

Under this programme the Centre is required to generate human resource and keep on organizing seminars, workshops, and laboratory sessions for the benefit of teachers and students. One of the primary requirements is to create qualified doctoral degree holding teachers who in turn will generate quality students. Following are the salient points of this programme proposed by the Centre.

1. Teachers who have been in the services of any Engineering and Technology Colleges approved by the UGC/AICTE are entitled for registration for Ph D with Chemical Engineering faculty of the ICT.
2. A minimum service of two years and permanent placement in the concerned college will be the basic criterion.
3. The teacher must have a consistently good academic record with minimum first class in bachelors and/or masters degree from a reputed university.
4. The college management should undertake the responsibility of releasing the person for experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned teacher and his supervisor, which will be approved by the Co-ordinator of the Centre. A bond in this regard should be signed and approved by the Director, ICT.
5. Teachers can work in the ICT labs during vacations and holidays and after their office hours if they come from colleges in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Co-ordinator of the Centre.
6. A maximum period of 5 years extendable by 1 year will be allowed in case of teachers who are part time but put in at least 3 months full time work in a year in the labs. In such cases, part of the experimental work could be allowed to be done in their premises for which their management will provide them with necessary facilities. The characterization and other sophisticated analysis must be done in ICT. Exclusive theoretical work should be discouraged as much as possible to give the teacher a hands-on experience and bringing them into an environment of research. However, this will be left to the individual supervisor's discretion, who should take abundant precaution to avoid unethical practices.
7. The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in international journals with decent impact factors. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.

8. The registered teachers as Ph D students should not register any Masters students with themselves in his/her own college to avoid research by proxy. The candidate as well as his/her supervisor must give an undertaking, with a counter signature of the concerned principal to this effect to avoid degeneration of this novel concept into a Ph D by unscrupulous means.
9. If the teacher intends to join the ICT on leave without pay for a period of three years, then the candidate could be eligible for the UGC fellowship under our SAP programme.
10. Teachers with Masters Degree will be allowed to undertake benefit of this scheme. Those who have got Bachelor's Degree ought to take leave from their colleges in order that they complete the theory part of the Masters Programme for direct Ph.D.
11. All regular admissions criteria are applicable to these candidates and they must also do the course work required for Ph.D. programme.

CENTRE OF EXCELLENCE FOR PROCESS INTENSIFICATION (CoE-PI)

The Centre for Process Intensification for Process Industries (CoE-PI) under TEQIP in the Institute of Chemical Technology (ICT), Mumbai, aims to be a world leader in the field of conceptual process design, Process Integration and Process engineering. The methodologies will allow environmentally friendly process design with the most efficient use of raw materials and energy with affordable cost. The Centre shall be dedicated to the development of design methodologies in the field of process intensification and process integration. The Centre aims to change process design practice, by developing and disseminating new process design and integration methods for clean and efficient use of raw materials and energy at lower cost. The process intensification and integration will be based on interactions between elements of the chemical and physical processes that take into account during the process design the material and energy flows. The resulting integrated processes exploit synergies between the system components, leading to processes with superior performances, in terms of their raw materials consumption, energy demand, process economics, environmental impact and sustainability. The centre has identified 13 research projects which have great relevance with present industrial practice.

DEPARTMENT OF CHEMISTRY

VISION:

To be a nationally recognized chemistry resource centre, making noteworthy academic contribution and undertaking contemporary and relevant research.

MISSION:

- To induct and retain competent and committed personnel
- To produce quality publication and proficient man power
- To collaborate with Industry and academic centres of excellence
- To undertake sponsored projects of national and social relevance
- To participate in state and national level educational programmes
- To conduct relevant and contemporary M.Sc. and Ph.D programmes

PROFILE:

Department of Chemistry was established in 1951 to cater the responsibility of teaching basic chemistry. The department shoulders the responsibility of conducting chemistry courses, theory as well as practical for undergraduate programmes of all the three branches, viz., B.Chem.engg., B. Tech. and B. Pharm. The Department also offers admission to Ph.D. (Science) Chemistry, Ph.D. (Science) Biotechnology, Ph.D.(Tech.) chemical engineering programme and the intake

of students varies based on the vacancies with the faculty members. Department has started M.Sc. (Chemistry) two years course by papers with an intake capacity of 20 from Academic Year 2010-2011. The programme is accredited by the Royal Society of Chemistry, UK in 2014.



The Department is active in teaching, research and industrial collaborative work. Considering the contributions the department has been recognised by the university Grant Commission, under special Assistance Programme (SAP), Departmental Research Support (DRS-II) and DST-FIST Programme. Through this programme the Department has 10 Ph.D. fellowships to offer. The faculty members

are actively engaged in research areas of current relevance. The research work carried out in the department is funded by the research projects sponsored by funding agencies like UGC, CSIR, DAE, IGCAR and DST. Some of the faculty members are carrying out research in collaboration with reputed organisation from both India and abroad. In the last five years the department has published more than 200 research publications in international journals of repute with an average impact factor of more than two. The work is also recognised well in term of large number of citations (more than 5000). The faculty member is actively involved in several extra-mural academic activities, like the Indian National Chemistry Olympiad, National Initiative for Undergraduate Sciences (NIUS). Currently the department has 45 Ph.D. and 37 M.Sc. Students. The Students who have obtained doctoral degrees from the Department get attractive placements in industries and research institution. The research students of the department assist the faculty in conducting undergraduate courses. This helps them in their personal development.



Organic Chemistry Undergraduate laboratory and three research laboratories renovated to state-of-art standards



- Major upgrading of equipments for UG, PG practicals as well as research facilities
- Three GC units reinstalled for UG and PG practicals with generous support from UAA
- Raman spectrometer acquired and installed

The Department is equipped with sophisticated instruments such as FTIR, UV-VIS, Spectrophotometer, GC-MS, gas chromatographs, HPLC, Zetameter, Viscometer, Microwave synthesizer, Digital polarimeter, computer workstation, Electrochemical Workstation, Vapour pressure reactor, supercritical carbon dioxide reactor, surface area analyser, high pressure reactors, Tensiometer, X-Ray diffraction unit. The Department has several endowments through which, experts from various leading research institutes working in frontier areas in Science and Technology are invited for lectures and interaction.

DEPARTMENT OF GENERAL ENGINEERING

VISION :

To contribute to India through excellence in technical education and research, to serve as a valuable resource for industry and society.

MISSION :

To impart basic knowledge of General Engineering subjects to students to enable them for better understanding of practical applications to various industrial problems.

To undertake collaborative projects which offer opportunities for long term interaction with academia and industry.

To provide an excellent educational experience for its students. This experience includes an emphasis on the technical communication, teamwork and life-long learning skills in which graduate engineers held to excel at the workplace and in society.

General Engineering Department of the Institute was established in the year 1954 and is involved in teaching undergraduate as well as postgraduate students of the institute. The Department is running a full time master's Program M. E. in Plastics Engineering from 1972, the course is accredited by National Board of Accreditation. Students having basic qualification in Mechanical, Production, Plastic/ polymer, Electrical and chemical engineering and technology are eligible for admission to this course. The course consists of curriculum on Processing of plastics, composites, Design of Molds, Design of processing tools/ machinery, CAD, CAM and CAE, Testing of plastics and Polymer applications in various fields of engineering. Development of new materials for industrial as well as domestic applications. Apart from laboratories such as workshop, electrical and electronics, Applied mechanics and Strength of materials. The department has a provision for special facilities of processing of plastic and polymer composites, testing of plastics, and computer aided design and drawing laboratories. These laboratories cater to the needs of the undergraduate and post graduate students of the department and the Institute. The Department has plastic processing equipment such as micro-processor controlled injection molding machine with molds of standard mechanical test pieces, blow molding machine, rotational molding machine, and as well as twin screw extruder. Department is having licensed CAD and CAE softwares such as Mold flow, Pro-engineer and Solid Works with high end computer facilities. The department is having a facility of Plastic Testing such as impact tester, MFI tester, hardness tester etc. Department has recently set up an Environmental Engineering Laboratory having facility of Synthesis of polymeric filter media membrane for water and wastewater treatment. Laboratory is well equipped with facilities for analysis of water and wastewater. All these laboratory facilities are used by M E and Ph D students to do their research work. GATE qualified candidates of M. E. in Plastics Engineering receive AICTE fellowship.

Candidates can register for Ph. D. in Plastics/ Mechanical/ Production/ Electrical/ Civil/ Engineering either full time or as the external candidates (Only for teachers/ employees from Government organizations). In recent years the enrollment for Ph D in the department is increasing. Presently number of PhD students enrolled in the department in various branches are: 29 in Mechanical Engineering, 09 in Civil Engineering, 05 in Plastic Engineering, 11 in Electrical Engineering and 04 in Electronics Engineering etc. This year 3 AICTE Doctoral students taken admission, besides 1 student already working under National Doctoral Fellowship. Department is also having industry sponsored Ph D student from BASF and Master's student from Dow Chemicals. Recently the department faculty has been awarded one national patent based on the work done in recently set up Environmental Engineering laboratory under DST funded project. The patent is on "Continuous extraction of pure water from feed with resaturation and reuse of draw". The technology is successfully implemented at Ausa, District : Latur. Department is also involved in execution of Research project funded by DST, Under this project a lake is rejuvenated, 5000lits/hr R O plant is set up which is catering the treated water needs of Ausa town. Another major project under Rajiv Gandhi Science and Technology Commission of Govt of Maharashtra is being executed by one of the faculty.

The department is having specialized teaching faculty from mechanical, plastics, production, civil, electrical and electronics branches. Most of the faculty are guides for the masters and doctoral

programs of the institute. Besides teaching and research, departmental faculty members are holding associate dean position and member of various inhouse committees to help the management of the institute. Students can take up research in multidisciplinary areas.

The department is also responsible for Civil and Electrical maintenance of infrastructure such as institute buildings, laboratories, faculty quarters and hostels. Department is actively involved in the development of the new buildings and infrastructural facilities in all the campuses. Department looks after Liasoning with BEST and Municipal Corporation for all the requirements of the institute upto some extent.

DEPARTMENT OF MATHEMATICS

VISION:

The Department of Mathematics, Institute of Chemical Technology, Mumbai, aims to be an internationally leading mathematics department that will offer innovative educational and research programmes in mathematical sciences and their applications in science and technology

MISSION:

In pursuit of its vision, the department wish to (i) offer courses and programs that will ensure that the student get practical knowledge in mathematics which will be relevant to the society (ii) provide a modern educational environment for instruction and research (iii) create an environment for learner to engage in solving real-world problems (iv) contribute to the understanding of complex mathematical structures and their applications.

RESEARCH AREAS:

The Department of Mathematics has research expertise mainly in the areas of Computational Fluid Dynamics and Mathematical Modeling, Momentum, Heat and Mass Transfer in Newtonian Non-Newtonian Fluids, Singular Perturbation Theory, Optimization Techniques, Statistical Analysis, Data Analysis, Mathematical Biology, Species Distribution Modeling, Applied Functional Analysis, Differential Equations, and Mathematical Pedagogy.

ABOUT THE DEPARTMENT:

The Department of Mathematics, ICT Mumbai was established in the year 1944. Since its inception it caters to all the courses related to mathematics, statistics and computer programming of UG and PG programmes in ICT. The department offers a 2 year M.Sc. programme in “Engineering Mathematics”. This programme was started in the academic year 2012-2013 under the UGC INNOVATIVE SCHEMES and is very unique in its nature. The department also has Ph.D. programme in Mathematics covering diverse area of research. The community of the department consists of six faculty members, with broad areas of expertise related to mathematics and statistics, and two support staffs. The department has modern and high level computational facilities, consisting of 50 All-In-One Computers, Two Servers, one workstation and a High Performance Computing (HPC) cluster. All computers are installed with software such as MATLAB, Mathematica, SPSS, R Python and Sagemath etc. The department has strong research collaborations with other renowned academic institutions and industries. Students are also provided with industrial internship and placements opportunity. The faculty members of the department are member of Board of Studies of several institutes. The department regularly arranges workshops, conferences and seminars for students and teachers of other colleges. Faculties are also engaged in various training programmes in mathematics and statistics across the country.

DEPARTMENT OF PHYSICS

VISION :

To evolve ourselves to understand and know the basics of science and to utilise it to develop newer technologies for the benefit of society and aptly be a part of this Esteemed Institution and to strive to infuse momentum to the Department so that this Department becomes one of the best learning centres of basic sciences and strive to make significant contributions to academia as well as to industry.

MISSION :

Innovatively follow newer ways of teaching and upgrade curricula to infuse enthusiasm of knowing in students.

Work in diverse fields and multidisciplinary themes so that learning and knowledge is gained by faculty to move further to fulfil the vision.

Strive to get funds to upgrade and maintain present research facilities.

To create POLYMER and NANO SCIENCE CENTRES.

Department of Physics at the ICT has the distinction of being one of the earliest Departments in the Institute. It was started as Optics Section in 1935 which was subsequently changed as Physics Section in the Second Five Year Plan and then to Department of Physics under MUICT. Department of Physics undertakes undergraduate and post graduate teaching in Physics. The Department participates in 1st year B. Tech. and B. Chem. UG teaching - theory and practical's. The Department offers electives at 2nd year B. Tech. and B.Chem. The faculty of the Department undertakes a full course of Physical Methods of Analysis for all branches of M. Tech. students in both the semesters which also serves as a credit course for majority of Ph.D. students. The Department has started M.Sc (Physics) (Material Science) course from year 2014 with emphasis on the Material Science with maximum strength as 20.

The Department is one of the participating Departments of Centre of Advanced Studies in Physico-Chemical Aspects in Textiles, Fibres, Dyes. The Department has made significant contributions in the field of Material Science (Study of Polymer/Polymer composites and nano-composites and their various properties), Solar Thermal Applications, Nano-aided Drug Delivery. The research in Colour assessment of dyed textiles and colour perception is also carried out in this Department. Currently 20 doctoral students are working on various topics. Faculty members have actively participated and attended national and international seminars / workshops and presented their papers. A good number of papers are published in peer reviewed journals. Faculty members have research projects from industry and various government funding agencies. Two patents on solar thermal system are also filed recently.

THRUST AREAS OF RESEARCH:

The faculty of the department undertakes research in many aspects of materials sciences:

- Polymer Morphology/Orientation, Polymer composites / nanocomposites.
- Nano-drug delivery.
- Polymer dispersed Liquid crystals, Plasma processing of Materials.
- Statistical Mechanics applied to Chemical Engineering Thermodynamics.
- Synthesis and functionalization of CNTs, Energy storage, Super-capacitors.
- Magnetism, transport properties of quantum magnets and Low-temperature Physics.
- Computational Physics, Phase Transitions in Polymers and Gels.
- Solar Thermal applications, Solar Energy Harvesting.

NAME OF THE PROGRAMMES OFFERED:**M.Sc. Physics (Material Science)**

Ph. D. in Physics (thrust area being Polymer/Polymer Composites and nanocomposites, Solar thermal, Coloured assessment of dyed fabric and study of geometric attributes of Colour, Nanoparticle synthesis, Theoretical aspects of Chemical Engineering, Probing Magnetic properties of materials, Carbon nanotubes, Graphene, Fuel cell electrocatalyst, Energy storage and Electrochemical sensors)

Admission Criteria for the programmes offered

For M.Sc. Physics: Eligibility: B.Sc. in Physics with minimum 55% or Selection based on Entrance exam. For Ph.D. Physics: Eligibility: M.Sc. in Physics with minimum 55% or Selection based on Entrance exam.

Courses handled:

First and Second Year B. Chem. Engg. and B. Tech. – Applied Physics I and II, Statistical Mechanics and Colour Physics

Courses for M. Tech. and M.Sc. (Textile Chemistry)

DEPARTMENT OF SPECIALITY CHEMICALS TECHNOLOGY

VISION :

To build world class programmes of excellence in education and research in the specialized area of Speciality Chemical Chemistry and Technology for the benefit of society through problem solving competencies

MISSION :

The department aspires to be one of the world's top color chemistry departments. It will do so by-

Providing knowledge and skilled based training at undergraduate and postgraduate level by designing, teaching, and periodically upgrading a color chemistry and technology syllabus in line with current anticipated trends in industry and academia

Pursuing world class research in colorants and related areas-basic textile and leather coloration, functional colorants, organic process technology and specialty chemicals

Proactively developing and maintaining close interaction with national and international research laboratories, universities and chemical industries

ABOUT

Speciality Chemical technology department started functioning in 1944 under the stewardship of Prof. K. Venkataraman, the then director of Institute of Chemical Technology (ICT, formerly known as UDCT), University of Mumbai and is an outstanding department, an epitome of skill, talent, hard-work and success. Highly experienced scientists and scholars such as Prof. B.D. Tilak, Prof. S. V. Sunthakar, Prof. S. Seshadri, and Prof. D.W. Rangnekar have enriched this department and led to its progress. More than 1000 undergraduate students and over 450 postgraduate students have passed out from this technology department.

Department of Speciality Chemicals Technology



Construction of new NMR laboratory



RESEARCH FOCUS

Late Prof. K. Venkataraman's pioneering work on synthetic Speciality Chemical chemistry, natural colorants, structural elucidation, spectral studies and his books on "The Chemistry of Synthetic Dyes" are still popular and treated as Bible for Speciality Chemical Chemists and Technologists around the world and was translated in more than 14 languages.

The outstanding research work carried out in the department has created permanent global impact on Speciality Chemicals and allied industries especially the Indian Speciality Chemical Industry. Publications of popular informative volumes, over 1000 publications of national and International repute, have led the progress of the department.

Presently the department is more focused on functional colorants, colorants for non textile applications and high performance pigments. These include the synthesis of laser colorants, colorants for optical information storage devices, colorants for ink-jet printing, colorants for biology, colorants for solar energy conversion and synthesis of various high performance pigments. The department is getting ready to meet the ever changing and demanding global challenges in the field of colorants and allied fields.

HIGHLIGHTS OF COURSE

The Speciality Chemical technology department is a unique centre of learning. It offers a very advanced curriculum which produces new generation of talented color technologists as well as bright researchers. The curriculum as well as on going research synchronizes with the latest industrial and academic developments. This has led to a high quality of industry-academia relations for better technology and products.

B.Tech. course in Speciality Chemical and Intermediates emphasizes Chemistry, Technology and Engineering of organic intermediates and colorants. We equip our student with knowledge of manufacturing processes, analytical techniques and laboratory synthesis with scaling up skills.

M.Tech. course in Speciality Chemical Technology mainly focusses on the latest process technology and business management. The main aim of this course is to provide better knowledge for the student and prepare him for entrepreneurship. Thos also have 4-6 months industry internship and an extensive project work.

Our curriculum envisages developing entrepreneur skill as well as research attitude. During the curriculum students are exposed to the general engineering skills like, tool design, electrical appliances, machine drawing, etc. In addition, a detailed study of basic sciences (Physics, Mathematics, and chemistry) and chemical engineering aspects are covered. Humanity related subjects like Industrial economics, Chemical Process Economics and Industrial management are also covered during the four-year course of B.Tech. Students also have the opportunity to develop the soft skills like effective communication and software programming languages.

We have a very good track record of 100 % placement for both B.Tech. and M.Tech. course. Our department have produced about 100 first generation entrepreneurs.

PERFUMERY AND FLAVOUR TECHNOLOGY

VISION :

Empowering the knowledge of perfumery, flavors and cosmetics through learning a cutting-edge **technology for the benefit of mankind.**

MISSION :

To educate students and professional in the area of perfumery and flavor, cosmetic technology.

To serve and upgrade the aroma industry in the form of chemical technology so as to make them competitive in local and global market.

Actively nurturing with close co-operation at National and International levels, with reputed institutions, industries, research and development organizations and universities.

We are using flavor and fragrances since last five millennia. The first individual chemist known to history was from the second millennium BCE in Mesopotamia. As an area of modern chemical industry, it is low profile compared with the pharmaceutical and petrochemicals. Yet it is a multi-billion dollar, global industry that impacts on everyone's life in the developed world.

Synthetic chemistry is developing new methodologies, so that materials which are important and available at high cost can be made available at an affordable price. Analytical work on examination

of new exotic materials may also lead to the identification of exciting new compounds.

Currently the organizations like Givaudan, IFF, Firmenich, Symrise and Quest International have turnovers greater than \$ 16 billion. The geographical distribution of sale of flavour and fragrance materials is surprising with North America 30.6 %, Asia Pacific 27 % and Western Europe 23.2%. The key factor is the development of global economy. The market for flavour and fragrance is a mirror of the affluence of a society. With this we can hope that billions can share the living standards of the developed world which in turn shall open the market for the flavour and fragrance industry.

Perfumery and Flavor Technology is a unique course in Institute of Chemical Technology. It started in the year 1990-91. Major funding agencies for this course are FAFAI and ICEOFF and Dr. R.Y. Mantri Endowment. We are offering two fellowships of Rs. 10,000 per month for the Masters course in Perfumery and Flavours.

DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY

VISION :

- To be the world class centre of excellence in teaching and research in chemical processing of fibres, textiles, apparels and the key areas of technical textiles with ecological, social and ethical responsibility, meeting the crucial needs of trained man power and technological solutions of Indian textile industry.

MISSION :

- To be the leader in offering top class human resources by training them from bachelors to doctorate level degrees in core competence i.e. in chemical processing of fibres, textiles and apparels.
- To train the industrial technicians as per the demands of the industry, upgrading their skill to meet international quality standards.
- To conduct industrially relevant research and provide technical guidance aimed at offering technology solutions and enhancing competitive edge to the industry.

Almost 5 years ago, in 1933, when the Indian Textile Industry was progressing in full swing in cities like Mumbai, and Ahmedabad, other industries were not even born. It was the time Sir Vitthal Chandavarkar was the Vice Chancellor of University of Mumbai and also the Chairman of Textile Mill Owners' Association.

Thus, the Department of Fibres and Textile Processing Technology (FTPT), formerly known as Textile Chemistry Section, has the unique distinction of being the first discipline with which this institution started. The Department conducts B.Tech. course with an intake capacity of 34, which is highest among all the B.Tech. courses of ICT. The course involves study of chemistry and manufacture of fibres, their chemical processing such as bleaching, dyeing, printing and finishing. It further encompasses the study of chemistry as well as application of various kinds of chemicals, dyes, thickeners, and finishing auxiliaries which are used in chemical processing of textile fabrics and garments. It also involves knowledge of green chemistry, biotechnology and nanotechnology with special reference to chemical processing of textiles.

The post graduate courses of M. Tech. in Fibres and Textile Processing Technology both, Regular- 2 years and Sponsored 3- Years, M.Sc. in Textile Chemistry, Ph.D. (Tech.) in Fibres and Textile Processing Technology, Ph.D. (Sci.) in Textile Chemistry and Ph.D. (Sci.) in Chemistry attract a large number of students and so far more than 2500 graduates and 500 post graduates have passed out from this Department. The faculty of the Department has good interaction with the industry. Several industries and institutions have signed MOUs for research collaboration with us. Under these MOUs we offer Ph.D. and M. Tech. courses to their scientists. A number of industries have been benefited by the technical advice given by the faculty. There have been a number of industrial and governmental research projects in which problems of mutual interest

are investigated and the students as well as the Department have been benefitting by this interaction. The Department is recognized as Centre of Advanced studies in “Physicochemical aspects of Textile, Fibres, Polymers and Dyes” presently in Phase VII, since 1962. It was also recognised under the MODROB scheme of UGC. The Department is has been funded by TEQIP. In the month of December 2012, the Department got recognised as DST-FIST funded Department for the second time. The department also played an important role in evaluating TUFs under Ministry of Textiles, GOI. Also, the Department organizes guest lectures by industry experts under different endowment programmes. An international conference ‘Texsummit’ was organized by the Department recently, in December 2012. The faculty is engaged in high quality fundamental as well as applied research and they have got over 1000 publications in Indian and International journals as well as reputed fellowships to the credit from recognized institutions in India and abroad.

After the globalization of the markets with border-less trade, textile manufacturing activities are shifted to country like India which is fast developing economy. Textile being one of the fundamental needs of human being, it is a mother industry, next to only agriculture sector, involving over 60 million people. Today, the business is fast growing and will soon touch around US\$ 100 Billion. However, in the border-less trade many multinational brands are competing and the critical area of chemical processing of textile fabrics and garments requires tremendous amount of consolidation in terms of well trained manpower which can keep pace with latest technological operations and demand of stringent quality parameters in shortest delivery time giving competitive edge to the manufacturers. There is a huge shortage of Textile Processing graduates in the core textile industry as well as in multinational and reputed Indian manufacturers of dyes, chemical and auxiliaries. Thus the scope for graduates and postgraduates of this Department is enormous and such a demand with every passing day will only be rising given that consumption of apparels and technical textiles in India and abroad is increasing at galloping rate. The Department has a twinning programme with Ethiopia for past 4 years and is involved in helping Ethiopian extile Industires Development Institute (ETIDI).

DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY

VISION :

Establishing a center of excellence to provide demand driven, value-based and quality technical education to make India a developed country through socio-economic transformation

MISSION :

Creating an atmosphere to deliver fundamental knowledge in Food Engineering and Technology for the students to fulfill the need of all segments of society and the environment.

Starting from the classroom teaching and simultaneously creating a multi-disciplinary platform capable of conducting research, technology development and solving industrial challenges.

Providing leadership and training personnel for the benefit of the industry and society complying with overall activity towards economic growth of the country.

This Department is the first in our country to offer specialized education in Food Technology. The B. Tech. (Food Eng. and Tech.) course trains the students in chemical, biochemical and microbial aspects of foods. Students are also taught how high quality products can be prepared and preserved for storage and how the storage conditions might affect the quality. The course gives adequate engineering inputs for large-scale production. The training also includes development of food products, manufacturing processes, design of factory with proper quality assurance system established. Economic feasibility of marketing such products is also taught during the course. The major research interests include carbohydrate chemistry and technology with focus on Indian traditional foods; and food microbiology related to quality, safety and

application of new technology. Prof. D.V. Rege Centre has been founded to cater to the needs of Food Technology Research.

The UGC has recognized the Department as Centre of Advanced Studies in Food Engineering and Technology, under which 15 SAP fellowships are awarded per year. A new course assisted by DBT in Food Biotechnology has been in place since 2009-10 with 10 M. Tech. GATE fellowships. The Department also participates in two interdisciplinary M. Tech. courses - Perfumery and Flavour Technology, and Bioprocess Technology.



Inauguration of Prof. D.V. Rege Centre for Advanced Food Technology on August 15, 2019 by Dr. G. N. Warke, Managing Director of Hi-Media Laboratories Pvt Ltd. The centre was renovated by the generous donation from Hi-Media.



High-Tech FET Conference Room was created with the generous donation by Fine Organic Industries Ltd. in the memory of Mr. Ramesh M. Shah, Founder of Fine Organic Industries Ltd. It was inaugurated by Prof. J.S. Pai, Executive Director, PFNDAI on November 16, 2019.

DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY

After WW-II, the Department for Technology of Oils, Fats and Waxes was started, which was headed by Professor J. G. Kane, whose work on non-edible oils was exceptional. The Department has been in forefront for its quality education. Several of its alumni have been industrialists and reputed educationists.

VISION :

Harnessing innovative skills of its faculty and students to achieve a global leadership position in Oils, Oleochemicals and Surfactants Technology, while nurturing a culture of trust and healthy competition in order to serve the critical professional needs of industry and society.

MISSION :

To pursue world class programs of excellence in education and research in specialized areas of Oils, Oleochemicals and Surfactants Technology relevant to the sustainable development of process industries that require problem solving competences in these core areas of knowledge.

What is this Technology?

The lipids are a class of biochemical compounds, many of which occur naturally in plants and animals. The lipids constitute a very large class of compounds, many of which play essential roles in organisms. Among the most important lipids are fats and oils, waxes, steroids, terpenes, fat-soluble vitamins, prostaglandins, phosphoglycerides, sphingolipids, and glycolipids. Phospholipids, for example, occur in all living organisms, where they are a major component of the membranes of most cells. The main use of fats commercially is in the production of soaps and other cleaning products. Oleochemicals are chemicals derived from biological oils or fats. The hydrolysis or alcoholysis of oils or fats form the basis of the oleochemical industry. The formation of basic oleochemical substances like fatty acids, fatty acid methyl esters (FAME), fatty alcohols, fatty amines and glycerols are by various chemical and enzymatic reactions. Intermediate chemical substances produced from these basic oleochemical substances include alcohol ethoxylates, alcohol sulfates, alcohol ether sulfates, quarterner ammonium substances, monoacylglycerols (MAG), diacylglycerols (DAG), structured triacylglycerols (TAG) and sugar esters. The importance of these chemicals is thus evident.

This Department has been pioneering in the field of Oil Technology. The curriculum has been designed to provide an in-depth knowledge of chemistry and technology of oils and fats, and their industrial applications. Career opportunities exist in oils mills and refineries, oleochemicals, soap and detergent manufacturing industries, surfactants and specialty chemical manufacture producing auxiliary chemicals, Paints, Cosmetics, Perfumery and raw materials used in the above industries. Several short and long term projects instituted by sponsoring bodies for process/product development have been supervised by the faculty as part of their routine research activity.

It also participates in M. Tech. in Perfumery and Flavour Technology, Green Technology and Bio-Process Technology.

DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

VISION :

To be a globally recognized premier educational and research Centre with world class facilities, adopting international best practices, focused on the integration of science and technology in the areas of Drug Discovery, Drug Delivery, Organic Process Research and Herbal Healthcare Products

MISSION :

To achieve the best in pedagogy and research, through creation of a dedicated team of faculty and state of art research facility, to develop skilled manpower and innovative cost effective technology to support national healthcare programmes.

This Department offers two distinct programmes - Pharmaceutical Technology and Pharmacy. The Pharmaceutical Technology course or the B. Tech. programme, earlier B.Sc. (Tech.), deals with the technology of manufacture of drugs and pharmaceuticals. It has all the ingredients for a solid foundation in basic sciences, mathematics, computation and chemical engineering. B. Tech. (Pharmaceuticals and Fine Chemicals) was started in 1943, and today the course is B.Tech. (Pharmaceutical Chemistry and Technology). Basic science subjects like chemistry, mathematics and physics are dealt with in depth, while students are introduced to subjects of biochemistry, microbiology and pharmacology. Strong background knowledge of chemical

engineering including chemical reaction engineering, unit operations, separation processes, instrumentation and process control, and stoichiometry is imparted to synergise with the major focus, which is on manufacturing process technology and chemistry of API, intermediates and fine chemicals and dosage form technology. Several distinguished alumni and many first generation renowned industrialists had their training in this Department. The aim of the B.Tech. (Pharma) course is to develop complete professional technologists/entrepreneurs for the active pharmaceutical ingredients (API) and pharmaceutical industry.

The B. Pharm. Course at ICT, started in 1958, was the first course of this kind in the state of Maharashtra. The course involves a detailed study of Pharmaceutics, Pharmaceutical and Medicinal chemistry, Pharmacology, Pharmaceutical Analysis and Pharmacognosy. The goal is to enable an understanding of the science of drugs and drug actions. The course is supported with in depth courses in basic sciences namely, organic chemistry, inorganic chemistry, physical chemistry, biochemistry, microbiology, maths and other relevant subjects like biotechnology, forensic pharmacy, management. The focus is on development of an expertise in the chemistry of drugs, drug effects, dosage regimen, drug toxicity and interactions with adequate knowledge of the synthesis of drugs, principles of drug formulation design and evaluation and regulatory requirements.

The UGC has recognized the Department as Centre of Advanced Studies in Pharmaceutical Science and Technology with supernumerary Single Girl Child Fellowships. Besides, fellowship are also accorded under various other government projects with individual faculty. The Department has also received support under the DST-FIST programme. Many industry sponsored projects, both National and International, are also currently in progress. Modern equipment, instruments and infrastructure are available for research. The faculty is highly active and has filed patents in a variety of areas including NCE's and drug delivery. The Department also participates actively in three inter disciplinary courses of ICT namely M.Tech. in Bioprocess Technology, M.Tech. in Perfumery and flavour Technology and M.Tech. in Green Technology. M. Tech. in Pharmaceutical Biotechnology has been started since last year with 10 GATE fellowships. The programme is multi-disciplinary.

DEPARTMENT OF POLYMER AND SURFACE ENGINEERING

VISION :

Empowering skills and knowledge about latest Research in the field of Polymer and Surface Coating Technologies.

MISSION :

To Pursue world class Programs on Excellence in Education and Research in the area of Polymer and Coating Technology for the sustainable development of Industries that require trouble shooting competencies in these core areas of knowledge.

The Department of Polymer and Surface Engineering has undergone changes in its nomenclature and was established in 1946. Earlier it was known as Paints, Pigments and Varnishes (PPV) Section and was steered in the beginning by none other than Professor N.R. Kamath, a famous chemical engineer, graduate of first batch of B.Sc. (Tech.), in 1936, who later migrated to IIT-Bombay as Head of Chemical Engineering and Deputy Director. The B.Sc. (Tech.) courses in plastics and paints technologies were started in 1946 and have been popular throughout the world. Several small and medium industries covering plastics, paint, printing ink, adhesive, sealers and allied industries have been founded by the graduates of the Department and maintained excellent connectivity with industry.

The Department runs two B. Tech. programmes: Polymer Engineering and Technology, and Surface Coating Technology.

What is Polymer Science and Engineering

Polymers are macromolecule that contains many monomer units, typically tens of thousands to millions. While many polymers occur naturally as products of biological processes, synthetic polymers are made by chemical processes that combine many monomers, together in chains, branched chains, or more complicated geometries. Starch, cellulose, proteins, and DNA are examples of natural polymers, while polyolefins, nylon, PET, ABS, Teflon, and PEEK etc. are examples of the synthetic variety. Both classes possess a number of highly useful properties that are as much a consequence of the large size of these molecules as of their chemical composition. Although most synthetic polymers are organic, that is, they contain carbon as an essential element along their chains, other important polymers, such as silicones, are based on noncarbon elements.

The rapid pace of advances in polymers, particularly after World War II, has been remarkable and the birth of this discipline in ICT in mid-1940s was timely. Synthetic polymers are so well integrated into the fabric of society that we take little notice of our dependence on them, whether it is health, medicine, clothing, transportation, housing, defense, energy, electronics, employment, space, and trade. Without a doubt, synthetic polymers have large impacts on our lives.

Although progress in polymer science and engineering can be considered ground-breaking, opportunities are abundant for creating new polymeric materials and modifying existing polymers for new applications; depolymerization and polymer recycling; oxo and biodegradable polymers; nano-composites, and the like. Scientific understanding is now replacing empiricism, and polymeric materials can be designed on the molecular scale to meet the ever more demanding needs of advanced technology. The possible control of synthetic processes by biological systems is promising as a means of perfecting structures. New catalysts offer the opportunity to make new materials with useful properties, and the design of new specialty polymers with high-value-added applications is an area of rapidly increasing emphasis. Theory, based in part on the availability of high-speed computing, offers new understanding and aids in the development of improved techniques for preparing polymers as well as predicting their properties. Analytical methods, including an array of new microscopic techniques particularly suited to polymers, have been developed recently and promise to work hand-in-hand with theoretical advances to provide a rational approach to developing new polymers and polymer products. The field of polymer science and engineering therefore shows no sign of diminished vigor, assuring new applications in medicine, biotechnology, electronics, and communications that will multiply the investment in research many times over in the next few decades.

The education provided to the students is the blend of practice and theory related to polymer science and engineering. The students learn to develop systems which are economically feasible and environmentally acceptable.

What is Surface Coating Technology?

Coating applied on other surface of the materials for the decoration and protection. The surface coating change aesthetic properties such as color, gloss, texture and functional properties like resistance to wear, chemical attack, permeability, weathering resistance without changing the bulk properties. These materials includes coatings, adhesives, sealants, varnishes, enamels, lacquers. Initially coating were solvent based however, the volatile organic compounds are compelling to develop ecofriendly coatings like water based, high solids coatings, powder coatings and radiation curable coatings. In general, organic coatings are based on a vehicle, usually a resin, which, after being spread out in a relatively thin film, changes to a solid. This change, called drying, may be due entirely to evaporation (solvent or water), or it may be caused by a chemical reaction, such as oxidation or polymerization. The materials providing the hiding are the opaque materials called pigments, dispersed in the vehicle, contribute colour, opacity, and increased durability and resistance.

The physical, chemical and mechanical properties of a material surface determine its applicability in many technical devices. Numerous applications could not be realized without the use of surface

modifications, coatings and thin film technology. Therefore, the need for efficient and effective methods of surface modification is becoming increasingly evident to allow the production of far superior products in terms of wear resistance, corrosion protection, enhanced biocompatibility, thermal insulation, improved optical and altered electronic properties. Coating technologies of particular interest include physical and chemical vapor deposition, thermal spraying, electrochemical deposition, sol-gel-syntheses, and plating. Surface modification includes directed energy techniques such as ion, electron and laser beams as well as etching procedures and thermo-chemical diffusion. Beyond that, mono-layers (e.g. SAM, Langmuir-Blodgett) have attained high significance in preparing thin films to modify biomedical surfaces. Recent novel techniques to prepare patterned surfaces (e.g. nano-imprint lithography, micro-contact printing) have proven their potential for the fabrication of integrated circuits and bioactive implants. Thus, this course offers an exciting field of study.

New trends related to surface engineering and coating technology for the synthesis of functional materials surfaces including novel fabrication methods, materials and applications, new characterization techniques as well as numerical simulation and modeling are some of the areas of research.

The Department is supported by UGC, DST, BRNS, etc.

DBT-ICT CENTRE FOR ENERGY BIOSCIENCES

VISION:

We aspire to be an internationally leading Centre for education to create industry ready manpower, generating new economic growth by providing solution to national and international agenda, and through world class translational research in the field of biosciences and industrial biotechnology.

MISSION:

To provide outcome based education, and research infrastructure to become global leader in creating industry ready manpower, and sustainable technologies based on biosciences and industrial technology for development, in joint efforts with industries, academia and business at national and international level.

The DBT-ICT Centre for Energy Biosciences (DBT-ICT-CEB) is a unique place that integrates basic and translational science capabilities for bioprocess development and scale up. Funded by the Department of Biotechnology, Ministry of Science and Technology, India, the Centre was established and formally inaugurated in May 2009. Established at a total cumulative cost equivalent to more than USD 15 million, the Centre is a part of the Institute of Chemical Technology (ICT) at Matunga, Mumbai, which is a deemed to be University under Section 3 of UGC Act 1956. The Centre was set up as a result of vision and efforts of Dr. M. K. Bhan, Secretary DBT and Dr. RenuSwarup, Advisor, DBT, and functions under the leadership of Dr. G. D. Yadav, Vice Chancellor, ICT. The projects and technical programs at the Centre are coordinated by Prof. Arvind Lali. The Centre is focused primarily at developing biotechnologies for deriving biofuels and other products from renewable resources for reducing India's rising dependence on petroleum and cut down greenhouse gas emissions. The Centre believes in building multidisciplinary capacity for development of integrated technology packages.

The Centre successfully completed its first phase of five years in 2013 and was awarded an extension of five years by the Department of Biotechnology with the extended mandate of upscaling and upgrading the platform technologies developed during the first phase. The 10 Ton/day biomass pilot plant set up by Industry has successfully validated all segments of the novel DBT-ICT Lignocellulosic Ethanol Technology in a continuous non-stop flow mode from biomass size reduction to ethanol fermentation. The technology is at present being taken to commercial scales by different oil marketing companies. The Centre has developed a highly competent working groups in the area of Synthetic biology, Fermentation technology, Green/Chemical catalysis, Algal technologies, Enzyme engineering and technology, Separation technologies. These groups

have developed a range of globally competitive cutting edge technologies that are at present being translated to demonstration and commercial scale plants.

With an outstanding achievement in the first phase, the second phase progressed to develop platform technologies for conversion of all domestic, industrial and agricultural wastes to renewable products (fuel, food, feed, material, energy and chemicals) using smart combinations of chemical and biological technologies. Also during the second phase, the Centre has developed an integrated biorefinery concept through multi-product processing using chemical or biological routes that are being taken up for technology transfer or scaleup. The Centre has expanded its state-of-art facility and procured several high-end equipment's and instruments that not only leads to high level contemporary research but also an accelerated development of several more scalable technologies based on the knowledge base generated. The Centre having completed its second phase in 2018, aims to continue the work in an intensive mission mode for innovative research and translation of developed technologies.

The Centre for Energy Biosciences has attracted a large number of industrial and academic collaborations as a result of its reputation of conducting cutting edge research and delivering viable and scalable solutions to the biotech industry. The Centre is also part of several national and international academic collaborations (Indo-UK, Indo-Australia, Indo-German, Indo-US and several national projects) with grants amounting to more than 10 million USD under various RandD schemes floated by Ministry of Science and Technology, Government of India. The technologies developed at the DBT-ICT Centre have been secured through patent filings across the world. A number of technologies have been already licensed to industries for pilot and commercial scale plants.

CENTRE OF GREEN TECHNOLOGY

Inception of the centre of Green Technology

The Green Technology center at ICT was incepted in 2005 under the potential for excellence scheme of the University of Mumbai. Subsequently, ICT has become a Deemed University and an Elite Center of Excellence in 2008. Since then the Green Technology programmes are conducted solely by Centre of Green Technology, ICT.

VISION :

To become a globally recognized Green Technology Centre of excellence, through illustrious academic contributions at the national and international level.

MISSION :

- To promote the objectives, principles and outcome of green processes and products.
- To transmit research outcome to industry for making processes and products environmentally benign.
- Human resource development with awareness of environment and hazard related issues.
- To undertake sponsored projects of national relevance.
- To get quality publications in peer reviewed journals, national and international forums for the benefit of scientific community and society.

Programmes offered by the Centre of Green Technology

The center of Green Technology offers an interdisciplinary M. Tech. programme of both part and full time. It also conducts a Ph.D. programme. GATE and GPAT qualified candidates admitted to the M Tech. programme are eligible for fellowships.

Highlights of the Green Technology programmes

Both the post graduate and Ph.D. programmes in Green Technology at ICT encompass the aspects of green and sustainable science and technology. As the programmes are interdisciplinary, the

post graduate and doctoral students get ample experience and support across the Departments of ICT both in terms of research and curricular courses. This broad spectrum expertise is a unique and valuable advantage.

Areas in which research projects carried out in the Centre of Green Technology

- Development of catalysts for energy efficient and green processes
- Synthesis and application of nanomaterials
- Green Technology in pharmaceuticals and drug synthesis
- Conversion of multi-step synthesis into cascade engineered synthesis
- Synthesis of biodegradable chemicals and materials
- Application of biotechnology for sustainability
- Synthesis of safe and benign chemicals with minimum impact on environment.
- Process equipment design and operation to achieve sustainability
- Green Technology for hazard free, benign processes and products

It is hoped that the centre emerge as a model school encompassing various disciplines of science, engineering and technology with the common goal of sustainability and environmental viability.





PROGRAMMES OF STUDY AND CRITERIA OF ELIGIBILITY FOR ADMISSION

STUDY IN INDIA PROGRAMME FOR FOREIGNERS AND QUOTA FOR NRI, PIO AND OTHER FOREIGN NATIONALS STUDENTS

1. The Ministry of Human Resources Development (HRD) has approved 'STUDY IN INDIA' programme to attract foreign students to pursue higher education in India. ICT, Mumbai has participated in this program for Undergraduate and Postgraduate programs and NRI, PIO and other foreign students are encouraged to apply for these programs through <https://www.studyinindia.gov.in/>.
2. NRI, PIO and other foreign national students interested for Under Graduate Programmes at ICT are also informed to apply through www.mahacet.org.
3. NRI, PIO and other foreign national students interested for Post Graduate (Masters and Doctorate).
4. Foreign students having their own fellowship can also apply.
5. For Programmes at ICT, Students are also informed to apply through www.ictmumbai.edu.in
6. ICT has decided to stay in "Study in India" program with One student per Programme.

3.1 PROGRAMMES OFFERED

BACHELOR'S PROGRAMMES [See Section 3.2 for details]

Admissions to B.Chem.Engg. and B.Tech. (seven branches) :

- a) 70% for State of Maharashtra and
- b) 30% for All India (all States and Union Territories including Maharashtra)

Admissions to B.Pharm.:

100% for State of Maharashtra.

Programmes Offered

1. Bachelor of Chemical Engineering (B. Chem. Engg.)
2. Bachelor of Pharmacy (B. Pharm.)
3. Bachelor of Technology (B. Tech.) in
 - a. Dyestuff Technology
 - b. Fibres and Textiles Processing Technology
 - c. Food Engineering and Technology
 - d. Oils, Oleochemicals and Surfactants Technology
 - e. Pharmaceutical Chemistry and Technology
 - f. Polymer Engineering and Technology
 - g. Surface Coating Technology

MASTER'S PROGRAMMES [See Section 3.3 for details]

Programmes Offered

1. Master of Chemical Engineering (M. Chem. Engg.) (Full-time 2-years)
2. Master of Pharmacy (M. Pharm.) (Full-time 2-years) in
 - Pharmaceutics
 - Pharmaceutical Chemistry
 - Medicinal Natural Products
3. Master of Technology (M. Tech.) (Full-time 2-years) in
 - Dyestuff Technology
 - Fibres and Textile Processing Technology
 - Food Engineering and Technology
 - Oils, Oleochemicals and Surfactants Technology
 - Pharmaceutical Chemistry and Technology

- Polymer Engineering and Technology
- Surface Coating Technology
- Green Technology
- Perfumery and Flavour Technology
- 4. Master of Technology (M. Tech.) (Full-time 2-years) in
 - Bioprocess Technology
 - Food Biotechnology
 - Pharmaceutical Biotechnology
- 5. M. E. (Plastic Engineering) (Full-time 2-years)
- 6. M. Sc. (By Papers) (Full-time 2-years) in
 - Chemistry
 - Engineering Mathematics
 - Physics (Material Science)
 - Textile Chemistry

DOCTORAL PROGRAMMES [See Section 3.4 for details]

1. Ph. D. (Tech.) and DIRECT Ph. D. (Tech.) in

- Bioprocess Technology
- Chemical Engineering
- Dyestuff Technology
- Fibres and Textile Processing Technology
- Food Biotechnology
- Food Engineering and Technology
- Green Technology
- Nanotechnology
- Oils, Oleochemicals and Surfactants Technology
- Pharmacy@
- Pharmaceutical Technology
- Polymer Engineering and Technology
- Surface Coating Technology
- Plastic Engineering
- Perfumery and Flavour Technology

Ph. D. (Tech.) in

- Civil Engineering
- Electrical Engineering
- Electronics Engineering
- Mechanical Engineering

@ Ph. D. (Tech.) in Pharmacy has following four branches:

- Pharmaceutics
- Pharmaceutical Chemistry
- Pharmacology
- Pharmacognosy

2. Ph. D. (Sci.) in

- Biochemistry
- Biotechnology
- Chemistry
- Physics
- Mathematics
- Food Science
- Textile Chemistry

All Ph.D. programmes are now redesigned with course work as per UGC regulations.

POSTGRADUATE DIPLOMA [See Section 3.5 for details]

POSTGRADUATE DIPLOMA IN CHEMICAL TECHNOLOGY MANAGEMENT

(One and Half Years)

HIGHLIGHTS:

1. A candidate, who fails to accept an offer of admission to any of the programmes, made by the Institute, for whatever reasons, forfeits his/her claim for admission for that academic year (1st July 2023 to 30th June 2024) and the seat may be offered to the next eligible candidate in the order of merit. The acceptance of the offer implies payment of the prescribed fees and deposit along with relevant documents by the date specified in the offer letter.
2. The Institute shall not enter into any correspondence with the candidates in the matter related to admission, such as incomplete forms, non-submission of necessary documents in given time period, non-submission of online fee of necessary application along with filled application form, absenteeism at the institutional tests for entrance tests for Master's and Ph D programmes, for any reason, non-acceptance of the offer of admission to any of the courses in given time period, etc.
3. No age limit is prescribed for admission to the programme.
All Rights regarding the admissions at the ICT are reserved with the Vice Chancellor, ICT.

3.2 ADMISSION TO BACHELOR'S PROGRAMMES

ADMISSION TO FIRST YEAR OF FOUR YEARS- B. Chem. Engg., B. Tech.

(SEVEN BRANCHES) AND B. Pharm. DEGREE PROGRAMMES IN ICT, MUMBAI

(FOR THE ACADEMIC YEAR 2023-24)

All these admissions will be conducted by Govt. of Maharashtra.

Please Refer Govt. of Maharashtra Brochure of Admissions and their Website

FOR ALL DETAILS (www.mahacet.org)

Admission quota for B. Chem. Engg./ B. Tech. (seven branches)/ B. Pharm. courses are as follows.

I [B. Chem. Engg. AND B. Tech. (SEVEN BRANCHES)]

The availability of seats for these courses shall be as

- a) 70% for State of Maharashtra and
- b) 30% for All India (all States and Union Territories including Maharashtra)

II [B. Pharm.] 100% for State of Maharashtra

BACHELOR'S PROGRAMMES OF STUDIES AND INTAKE CAPACITY

All UG Programmes are post - HSC/ 12th Std. Four - Year Semesterised Degree Programmes.

1. Bachelor of Chemical Engineering (B. Chem. Engg.) : 75 Seats
2. Bachelor of Technology (B.Tech.) in
 - (a) Dyestuff Technology : 18 Seats
 - (b) Fibres and Textiles Processing Technology : 34 Seats
 - (c) Food Engineering and Technology : 16 Seats
 - (d) Oils, Oleochemicals and Surfactants Technology : 16 Seats
 - (e) Pharmaceuticals Chemistry and Technology : 18 Seats
 - (f) Polymer Engineering and Technology : 16 Seats
 - (g) Surface Coating Technology : 16 Seats

3. Bachelor of Pharmacy (B.Pharm.) : 30 Seats

FEES, CONCESSIONS, CANCELLATIONS AND REFUND:

The candidates admitted during 2023-24 are required to pay fees as prescribed by the State government (subject to revision by the State Government).

The institutional fees to be paid by all the admitted candidates are as follows :

Sr. No.	Details	Fee for 1 st Year (Rs.)**
1.	Library Deposit	5,000/-
2.	Fees	As per Government Regulations
	TOTAL	To be Declared in Admission Notice

*Note: Fees of candidates belonging to SC/ST/OBC/VJNT/SBC is reimbursed by Govt. of Maharashtra.

**These are only indicative figures and likely to be changed.

Cancellation rules of the fees will as per MH-CET/DTE guidelines

3.3 MASTER'S DEGREE PROGRAMMES

PROGRAMMES OF STUDIES, ADMISSION CRITERIA AND CAPACITY

- All Masters programmes listed in the Table 3.3.1 are full-time programmes of 2 years duration.
- M. Chem. Engg. and all M. Tech. Programmes are partly by papers (two semesters) and partly by thesis (two semesters) with fellowship for students who have valid GATE/GPAT Examination scores.
- All M. Sc. Programmes are two-year programmes (four semesters) only by papers. No fellowships are available to any of the M. Sc. (by papers) Programmes.
- For eligibility, the candidate should have passed any one of the Bachelor's degree as mentioned in required qualification for that respective programme. The candidate should have passed Bachelor's degree from ICT or any equivalent examination of a post HSC/HSSC four-year degree programme of IIT/NIT or any university/institute recognized by UGC/AICTE. **For all the Postgraduate Programmes as listed in Table 3.3.1, the candidate should have passed required bachelor's degree with 60% marks in aggregate or equivalent CGPA. (55% marks in aggregate or equivalent CGPA for the backward class candidates)**
- Any other equivalent degree of full four-year duration for that respective programme will be considered subject to the clearance from the equivalence recognition committee of Institute of Chemical Technology.
- For M. Tech. programmes in Bioprocess Technology, Food Biotechnology and Pharmaceutical Biotechnology, admissions will be done through Graduate Aptitude Test – biotechnology (GAT-B) 2023 conducted by Department of Biotechnology. The internal distribution of seats, if any, will be declared at the time of admission. The detailed procedure for filling the application form, payment of application fee and uploading of required documents/certificates is given at : <https://dbt.nta.ac.in/> A non-refundable and non-transferable application fee will be charged as per DBT guidelines and the admitted candidates will receive fellowship as per DBT guidelines.
- For three different specializations in M. Pharm. programme, candidates will have to fill option form clearly stating his/her preferences at the time of admission. The preference will be given based on merit. Only in case of seats remaining vacant, the candidate will be transferred to higher preference.
- The selection for the AICTE fellowship shall be based on valid GATE/GPAT score (Level

1 – Table 3.3.2) and the performance in the Institute’s written test. (Level 2 and Level 3 – Table 3.3.2). The admissions for Level 2 and Level 3 programmes will be done on the basis of marks obtained in Institute entrance examination.

9. Reservation policy will be applicable as per the government norms.

TABLE 3.3.1 : MASTER’S DEGREE PROGRAMMES

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
1	M. Chem. Engg.	30	B. Chem. Engg, B. E./B. Tech in Chemical Engineering/Biochemical Engineering. B. E./B. Tech./B. Sc. (Tech.) in Textile Processing/Textile Chemistry/Textile Technology/Fibres and Textile Processing/Fiber Technology with significant emphasis on chemical processing of Textiles B. E./B. Tech./B. Sc. (Tech.) in Food Engineering and Technology/Food Engineering/ Food Technology/ Food Science/ Food Processing Technology. B. Tech/B. Sc. (Tech.) in Oils Technology/Oils, Oleochemicals and Surfactants Technology. B. E./B. Tech./B. Sc. (Tech.) in Polymer Engineering and Technology/Surface Coating Technology/Technology of Plastics/Technology of Paints/ Rubber Technology/Polymer Engineering/Plastics Engineering/Petrochemical Engineering/Petrochemical Technology/Paints Technology/ Polymer Technology/Plastics Technology
2	M. Tech. (Dyestuff Technology)	18	B. Chem. Engg./B. Sc. (Tech.)/B. Tech. in any branch of Chemical Technology/Biotechnology/ B.Pharm M.Sc. (Chemistry)
3	M. Tech. (Oils, Oleochemicals and Surfactants Technolgy)	18	B. Chem. Engg./B. Sc. (Tech.)/B. Tech. in any branch of Chemical Technology and Engineering
4	M. Tech. (Food Engineering and Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Food Engineering and Technology/Food Engineering/Food Technolgy/Food Science/ Food Process Engineering
5	M. Tech. (Polymer Engineering and Technology)	18	B. E./B.Tech./B. Sc. (Tech.) in Polymer Engineering and Technology/Plastics Technology/Plastic Processing/Rubber Technology/ Petrochemicals and Chemical Engineering/ Surface Coating/Paint Technology
6	M. Tech. (Surface Coating Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Surface Coating Technology/Paints Technology/Oils Technology/ Polymer Technology/ Chemical Engineering
7	M. Tech. (Fibres and Textiles Processing Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Textile Processing/Textile Chemistry/Textile Technology/ Fibers and Textile Processing Technology/Fiber Technology with significant emphasis on chemical processing of Textiles

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
8	M. Tech. (Pharmaceutical Chemistry and Technology)	18	B. Sc. (Tech.) in Pharmaceuticals and Fine Chemicals/ B. Tech. in Pharmaceutical Chemistry and Technology/B. Pharm. or equivalent B. Tech. with Pharmacy background only
9	M. Pharm. Pharmaceutics Pharmaceutical Chemistry Medicinal Natural Products	6 6 6	B. Pharm.
10	M.E (Plastics Engineering)	18	B. E./B.Tech. in Mechanical Engineering/Plastics Engineering/Polymer Engineering/Production Engineering/Chemical Engineering/Chemical Plant Engineering
11	M. Tech. (Green Technology)	30	B. Chem. Engg./B. Tech./B. Sc. (Tech.) in any branch of Chemical Technology/Biotechnology. B. Pharm. M. Sc. in Chemistry/Biotechnology/Biochemistry
12	M. Tech. (Perfumary and Flavour Technology)	18	B. Chem. Engg./B. Tech./B. Sc. (Tech.) B. Tech./B. Sc. (Tech.) in any branch of Chemical Technology/Biotechnology. B. Pharm. M. Sc. in Chemistry/Biotechnology/Biochemistry
13	M. Tech. (Bioprocess Technology)	30	B. Chem. Engg./B. Pharm. B. E./B. Tech. in Chemical Engineering/Chemical Technology/Food Engineering and Technology/ Food Engineering/Food Technology/Food Process Technology/Food Process Engineering/ Dairy Technology/Biotechnology/Biochemical Engineering/ Biomedical Engineering/Pharmaceutical Technology/ Industrial Biotechnology.
14	M. Tech (Food Biotechnology)	10	B. E/B. Tech/B. Sc. (Tech) in Food Engineering and Technology/Food Engineering/Food Technology/ Food Science/Food Process Technology/Food Process Engineering/Dairy Technology/Biotechnology/ Biochemical Engineering/Pharmaceutical Technology/Oil Technology.
15	M. Tech. (Pharmaceutical Biotechnology)	15	B. Pharm. B. E./B. Tech./B. Sc. (Tech.) in Biotechnology/ Biochemical Engineering/ Pharmaceutical Technology/Industrial Biotechnology B.E/B.Tech in Chemical Engineering /Biomedical Engineering. B.Chem.Engg
16	M. Sc. (Chemistry) By Papers	20	B. Sc. with Chemistry as major subject and and Mathematics at HSC Level

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
17	M. Sc. (Engineering Mathematics) By Papers	20	B. Sc. with Mathematics/Statistics B.E /B. Tech. with at least four mathematics courses.
18	M. Sc. (Physics) Material Science By Papers	20	B. Sc. with Physics at third year of the programme B. E./B.Tech. only if equivalence committee at ICT recommends based on syllabus.
19	M. Sc. (Textile Chemistry) By Papers	20	B. Sc. with chemistry at the third year of programme.

Master's Degree (Full time, 2 years) Programmes at ICT - IOCB Campus

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
1	M. Tech. (Food Engineering and Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Food Engineering and Technology/Food Engineering/Food Technology/Food Science/ Food Process Engineering
2	M. Tech (Pharmaceutical Technology)	18	B. Sc. (Tech.) in Pharmaceuticals and Fine Chemicals/B. Tech. in Pharmaceutical Chemistry and Technology/B. Pharm. or equivalent B. Tech. with B. Chem. Engg./B. E./B. Tech. background only
3	M. Tech. (Petrochemical Technology)	18	B. Chem. Engg./B. E./B. Tech. in Chemical Engineering/Chemical Technology/Petroleum Engineering, B. Tech. (Polymer Engineering and Technology, B. E. (Polymer Engg./Plastic Engg.), B. E. (Petrochemical Engineering/Technology)

Master's Degree (Full time, 2 years) Programmes at ICT - MARJ Campus

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
1	M. Tech. (Food Engineering and Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Food Engineering and Technology/Food Engineering/Food Technology/ Food Science/Food Process Engineering
2	M. Tech. (Pharmaceutical Technology)	18	B. Sc. (Tech.) in Pharmaceuticals and Fine Chemicals/B. Tech. in Pharmaceutical Chemistry and Technology /B. Pharm. or equivalent B. Tech. with Pharmacy background only
3	M. Tech. (Polymer Engineering and Technology)	18	B. E./B. Tech./B. Sc. (Tech.) in Polymer Engineering and Technology/Plastics Technology/Plastic Processing/Rubber Technology/Petrochemicals and Chemical Engineering

3.3.2 GRADUATE APTITUDE TEST IN ENGINEERING (GATE) AND GRADUATE PHARMACY APTITUDE TEST (GPAT) FOR THE AICTE FELLOWSHIPS

- (1) The candidates seeking admission to the degrees of M. Chem. Engg./M.Tech./ M. E.(Plastic Engg.) are required to qualify the Graduate Aptitude Test in Engineering (GATE) conducted at the national level.
- (2) The candidates seeking admission to M. Pharm. are required to qualify the Graduate Pharmacy Aptitude Test conducted at the national level. Qualified candidates are also eligible for admission to M. Tech. (Green Tech.), M. Tech. (Perfumery and Flavour Technology) and M. Tech. (Oils, Oleochemicals and Surfactants Technology) Programmes.
- (3) Rules for availing GATE scholarships:
 - a. The Fellowships (subject to sanction and availability) are awarded only to the candidates who have passed the GATE examination with valid score and on the basis of merit.
 - b. The student must give an undertaking to the effect that he/she would not leave the course midway in order to be eligible to receive the Fellowship. During the course of studies, such student shall not receive any other fellowship/ honorarium/ emoluments, salary, stipend, etc., from any other source. Any violation in such cases will be dealt with as per AICTE/ Funding Agency norms.
 - c. The student receiving the fellowship must secure minimum 60% marks or equivalent CGPA during the first and the second semester course work examinations to become eligible for continuation of the Fellowship at the existing rate during the second, third and fourth semesters, respectively.
 - d. Students are being cautioned that according to AICTE rules, a student who secures marks below 60% or equivalent CGPA in the first and/or second semester examination shall be eligible to get a reduced fellowship at the rate of Rs. 1,000/- p.m. only.
 - e. In case of failure at the semester I examination, the fellowship shall be discontinued during the remaining period of the course. The fellowship may also be discontinued at any kind of misconduct by the student receiving the same. The fellowship once discontinued shall not be restored, even if a student secures 60% marks or equivalent CGPA at the second semester.
 - f. The Fellowship amounts are normally disbursed every month after starting the Fellowship, subject to receiving the grant from the AICTE. The fellowship amount shall be disbursed only after receiving the appropriate grant from the AICTE.
 - g. Documents required for fellowship
 1. Valid GATE/GPAT Score card pdf copy.
 2. Reserved Category Document
 - I. Cast Certificate
 - II. Cast Validity
 - III. Non-Creamy Layer Certificate
 3. Aadhar Card

The Institute shall not be responsible for non-receipt of fellowship grant from AICTE in time. The students will be required to give an Undertaking in writing to this effect.

3.3.3 ADMISSION CRITERIA

Admission to the Master's Programmes (Sr. No. 1- 15 in Table 3.3.1 and those at ICT - IOCB and ICT - MARJ Campuses in the following Tables) are available subject to the rules given below:

The first preference for admission to a Programme/ Branch will be given to the candidates qualifying Bachelor's course with valid GATE/GPAT score, as applicable from the respective discipline (Level 1 - Table 3.3.2).

Seats vacant after Level 1 will be allotted to Level 2 candidates as per the merit list. Only after filling the vacancies by such candidates, the candidates possessing a qualifying Bachelor's degree with valid GATE/GPAT score from any other programme/ branch will be considered for admission. (Level 2 - See Table 3.3.2)

Preparation of the merit list will be done at two levels, Level 1 and Level 2 separately.

Level 1: Merit list will be prepared on valid GATE/GPAT score in the specified subject and no written test or interview will be conducted. Admissions through Level 2 shall be made only if any seats remain vacant after exhausting the merit list from Level 1.

Level 2: Merit list will be prepared on the basis of valid GATE score (in any subject) and written test (based on the syllabus specified by the Department for the course in which the candidate is seeking admission) on the basis of 70:30 weightage. In case of interdisciplinary shift of Programme/Branch, interviews will be conducted to find the suitability of the candidate. There will be an external expert on the interview committee.

Level 3: Merit list will be prepared on the basis of written test alone (based on the syllabus specified by the Department for the course in which the candidate is seeking admission).

Admission to the following three courses :

- a. M. Tech. (Bioprocess Technology)
- b. M. Tech. (Food Biotechnology)
- c. M. Tech. (Pharmaceutical Biotechnology)

will be based on the results of the Graduate Aptitude Test-Biotechnology (GAT-B) 2023 conducted by Department of Biotechnology. The details are given at: www.rcb.res.in/GATB.

Table 3.3.2: Criterion for Preparation of Merit List

Department conducting the written test	Course in which the candidate is seeking admission	Preparation of First Merit list
Chemical Engineering	M. Chem. Engg.	Level 1 and 2
Speciality Chemical Technology	M. Tech. (Dyestuff Technology)	Level 2
	M. Tech. (Perfumary and Flavour Technology)	Level 2
Fibres and Textile Processing Technology	M. Tech. (Fibres and Textile Processing Technology)	Level 1 and 2
	M. Sc. (Textile Chemistry)	Level 3
Food Engineering and Technology	M. Tech. (Food Engineering and Technology)	Level 1 and 2
Oils, Oleochemicals and Surfactants Technology	M. Tech. (Oils, Oleochemicals and Surfactants)	Level 2
Pharmaceutical Sciences and Technology	M. Tech. (Pharm. Chem. Tech.)/M. Tech. (Pharm. Tech.)	Level 2
	M. Pharm.	Level 1
Polymer and Surface Engineering	M. Tech. (Pharm. Chem. Tech.)/M. Tech. (Pharm. Tech.)	Level 1 and 2
	M. Tech. (Surface Coating Technology)	Level 2

Department conducting the written test	Course in which the candidate is seeking admission	Preparation of First Merit list
General Engineering	M. E. (Plastics Engineering)	Level 2
Chemistry	M. Tech. (Green Tech.)	Level 2
	M. Sc. (Chemistry)	Level 3
Mathematics	M. Sc. (Engineering Mathematics)	Level 3
Physics	M. Tech. (Green Tech.)	Level 3

The admission procedure for M. Chem. Engg., M. Tech. and M. Pharm. programmes will be conducted after declaration of GATE 2023/GPAT 2023 results. Candidates are requested to visit the institute website time to time for admission related matters. The candidates who are qualified with valid GATE/GPAT score and appearing for final semester examination of the qualifying Bachelor's programme must have obtained aggregate 60% of the marks or equivalent CGPA [55% of the marks or equivalent CGPA for the backward class candidate] at the end of 6th semester of the qualifying Bachelor's course. Only a provisional admission will be offered in such cases. For confirmation of admission, at a later date, however, overall 60% of the marks in aggregate or equivalent CGPA [55% of the marks in aggregate or equivalent CGPA for the backward class candidate] are necessary at the qualifying examination. The admission of candidate not fulfilling the admission criteria may be cancelled at any time during the tenure of programme.

In case the candidate is admitted to a programme/branch other than the one in which he/she has obtained qualifying Bachelor's degree, he/she will have to undergo at least Three Make-Up Credit Courses (to be decided by the department admitting such candidate).

Preference will be given to candidates with valid GATE/GPAT score; however, Non-GATE/Non-GPAT candidates may also apply. The merit of Non-GATE candidates will be totally based on the written test designed on the basic course, the syllabus of which shall be provided by each Department and displayed on the ICT website.

Design of written test would be such that basic knowledge in the discipline in which the candidate is seeking admission is tested. The syllabus for the written test will be available on the ICT website.

The final merit lists would be prepared on the basis of the criteria given above.

The group of selected candidates, unless selected on a specific project, may be given a presentation about all research activities in the department and available projects for selection of project/guide. The final allotment of the research guides will be done by the Departmental committee based on the merit and preferences given by the candidate and admissible rules and regulations.

All these rules also apply to the candidates who will be conducting their research work leading to a Degree under any type of sponsored projects (Govt. or Private).

3.3.4 APPLICATION PROCEDURE FOR MASTER'S PROGRAMMES

For admission at the ICT for any of the Master's Programmes, a candidate should apply online for admission applications. (website <http://ictmumbai.edu.in>). Click on Apply online for Admission 2022-2023.

3.3.4.1 ONLINE APPLICATION :

To Fill the online application form below steps are required:

Step: 1 » Personal Information.

Date of birth, Mobile No, Address, Caste, Category Details, Scanned colour Photo (Must be less than 40 kb, format-.jpg/.jpeg).

Step: 2 » Education details starting with Xth, XIIth/ Diploma, Graduation (if applicable).

Carefully select between options of Percent System or Grade System.

Year of Passing of each degree should be carefully specified.

Board of Examination decides the normalization factor, so specify correctly.

Step: 3 » Entrance Exam Details.

Select entrance exam in which you will appear.

Enter Application Id, Mobile Number, Roll No, Enter Grade/ Percentage/ Percentile/ score/ Rank correctly.

Step: 4 and 5 » Upload Scanned Documents.

All mark sheets and certificates.

Category/ caste document, migration, domicile certificate etc.

Step: 6 » Payment details for admission form.

You can pay application form fee with online mode by using Credit/ Debit card or by Net Banking only.

After submitting the form, students can take a print of application form for their reference.

The candidate shall fill the appropriate application form/s, separate for each programme of choice.

All the relevant entries in the application form must be completed. Incomplete forms will be rejected and no correspondence will be made in this regard.

Writing contact details such as permanent address, address for correspondence, Mobile No./ Telephone No./ and email address in the application form is essential. Do not leave any space blank.

The duly filled form along with ATTESTED PHOTOCOPIES of required certificates to substantiate the claims made in their application form should be submitted online. The Admission application fees once paid is non-refundable and non-transferable under any circumstances.

Incomplete applications shall be rejected without entering into any correspondence with the applicant.

The candidates seeking admission at the ICT must submit ATTESTED PHOTOCOPIES of all the documents as given in Table 3.3.3 below along with the application form.

Attachment of any certificates will not be accepted separately after submission of the application form.

The candidates belonging to the reserved categories will be required to submit Caste Certificate, Caste/ Tribe Validity Certificate as applicable at the time of submitting the application form, failing which the category claimed, will not be granted and the candidate will be treated as a General candidate.

The candidates shall not attach a copy of any other certificate which is not asked for, such as certificates for participation in sports, cultural activities, etc.

If the candidate produces any certificate, which is not in Marathi, Hindi or English language, authenticated Marathi, Hindi or English version of the same, duly attested by a Gazetted Officer shall also be produced.

TABLE 3.3.3 : Documents to be attached with the Application form for PG admissions

Sr. No.	Type of Candidate	Attested true copies of documents to be attached along with application form
I	All Candidates	1. SSC (Std. X) mark sheet,
		2. HSC (Std. XII) mark sheet,
		3. All Mark sheets of Bachelor's Course
		4. Bachelor's degree certificate
		5. College Leaving/ Transfer certificate
		6. Migration certificate (within one month after confirmation of admission)
		7. Industrial/Teaching experience/ Gap Certificate, if any
		8. GATE/GPAT score card.
II	Backward class Candidates belonging to SC/ ST Categories	Caste certificate, Caste/ Tribe Validity certificate, as applicable. (In addition to the documents mentioned in Sr. No. I)
III	Backward Class Candidates belonging to OBC category (Maharashtra State candidates only)	Caste certificate, Caste/ Tribe Validity certificate, Non Creamy Layer Certificate valid up to 31 st March 2021. (In addition to the documents mentioned in Sr. No. I)
IV	Backward Class Candidates belonging to OBC category (Outside Maharashtra State candidates only)	Cast Certificate issued by Central Government

3.3.5 RULES AND REGULATIONS ABOUT RESERVATION

Reservation in admission is only for SC/ST/OBC categories on All-India basis will be applicable to all of the Masters Programmes M. Chem. Engg., M. Pharm., M. Tech. (all branches), M. E. (Plastic Engg.), M. Sc. as per the Government norms.

3.3.5.1 CASTE CERTIFICATE AND CASTE/ TRIBE VALIDITY CERTIFICATE.

- Caste Certificate: The candidates belonging to the backward class category will be required to submit the Caste Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.
- Caste Validity Certificate: The candidates belonging to the SC/ST/OBC category will be required to submit the Caste/Tribe Validity Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.

3.3.6 FEES, CONCESSIONS, CANCELLATIONS AND REFUND

3.3.6.1 FEES PRESCRIBED:

The candidates admitted during 2023-2024 are required to pay fees as prescribed by the State government (subject to revision by the State Government).

The institutional fees to be paid by all the admitted candidates are as follows.

These are only indicative figures and likely to be changed :

POSTGRADUATE (M. CHEM. ENGG., M. Tech., M. PHARM., M. E. (PLASTIC ENGG.))

Sr. No.	Details	Fee for 1 st Year (Rs.)
1.	Library Deposit	5,000/- (One Time)
2.	Academic Fees	45,000/-
3.	Other Fees	42,000/- (Including Contingency)
	TOTAL	92,000/-

Second Year Fees : Rs. 1,00,000/-

*Note: Contingency amount for Masters students admitted under various fellowships will be as per the norms of respective sponsoring funding agencies.

Fee structure for M.Sc. (Physics/Chemistry/Textile Chemistry) Courses at ICT for the academic year 2023-2024.

Sr. No.	Details	Fee for 1 st Year (Rs.)
1.	Library Deposit	5,000/-
2.	Fees	40,000/-
3.	Other Fees	25,000/-
	TOTAL	70,000/-

Second Year Fees : Rs. 76,500/-

Fee structure for M.Sc. (Mathematics) Courses at ICT for the academic year 2023-2024.

Sr. No.	Details	Fee for 1 st Year (Rs.)
1.	Library Deposit	5,000/-
2.	Fees	40,000/-
3.	Other Fees	20,000/-
	TOTAL	65,000/-

Second Year Fees : Rs. 71,000/-

Notes:-

- For confirmation of seat allotted, all candidates have to submit Demand Draft in favour of 'INSTITUTE OF CHEMICAL TECHNOLOGY, Mumbai', payable at Mumbai, of appropriate values as shown in above TABLE.
- Hostel Fees shall be charged additionally in case of candidates opting for hostel accommodation (the details are given in Section on Hostels).
- Vide letters no. जा.क्रं./स.आ.स.क/मु.श./व्या.प.आ./अ.जा.फ्रि.स्कॉ/2015-16@5012 dated 17th August, 2015 received from Assistant Commissioner, Social Welfare Department, Mumbai city and जा.क्रं./सकआ/शिक्षण/रतंस/2015-16 पुणे 2164 dated 11th August, 2015 received from Joint Director, Social Welfare Department, Pune, "All reserved category students for Master and Ph.D. who are getting any fellowship are not entitled to get Freeship/Scholarship from Government of Maharashtra."

3.3.6.2 LIBRARY DEPOSIT:

Library deposit received from the students shall be refunded after successful completion of the programme or after cancelling the admission, subject to producing Original Receipt. Unless there is any recovery, no deduction shall be made from the Library deposit. However, the amount of Library deposit shall be credited to institute, if the candidate does not apply for refund, within 3 complete financial years after the student actually leaves the institution; or, within 3 complete financial years after the date of successful completion of the course, whichever is earlier.

3.3.6.3 REIMBURSEMENT OF TUITION FEE:

Candidates claiming concession under the categories of EBC and sons and daughters for teaching and non-teaching staff of primary, secondary and higher secondary schools shall pay entire fee as applicable at the time of admission and subsequently candidates have to apply to the respective authorities for reimbursement of tuition fees. The quantum of reimbursement received by the institute from the concerned authorities shall be disbursed to the candidate.

3.3.6.4 CANCELLATION OF ADMISSION AND REFUND OF FEES:

Candidate who has been admitted to ICT may cancel admission by submitting an application in duplicate, in the prescribed Proforma - E and request for refund of fees. The refund of fees as applicable shall be made in due course of time. It is made clear that such application for cancellations will be considered if and only if the admission has been confirmed by paying the prescribed tuition fee and other fees in full and by submitting all the necessary original documents. Refund shall be made after deduction of cancellation charges as shown below -

All Rights regarding the admissions at the ICT are reserved with the Vice Chancellor, ICT.

Sr. No.	SITUATION	REFUND
1	Request received on or before 15 calendar days from the Date of Admission (including the Admission Day)*	Entire fee less Rs.2000/-
2	Request received between 16 to 30 calendar days from the Date of Admission (including the Admission Day)*	50% of entire fee
3	Request received after 30 calendar days from the Date of Admission (including the Admission Day)*	No refund except library deposit

* Admission cancellation request must be received on or before the last day of the PG Admission 2023-24, which will be announced in a separate notice on ICT Website. Admission cancellation request received after the last day of PG Admission 2023-24, irrespective of the No. of days from the Date of Admission will not receive any refund (Except library deposit). These Rules will be applicable across all campuses of ICT Mumbai

3.4 DOCTOR OF PHILOSOPHY (Ph. D.) PROGRAMMES

3.4.1 PROGRAMMES OF DOCTORAL STUDIES

As per the UGC directives the minimum period of PhD shall be three years. Table 3.4.1 shows various doctoral programmes (by research) in various disciplines in Science and Technology. Apart from original research, all Ph. D. programmes have a course work component effective from September 2009.

TABLE 3.4.1: DOCTORAL DEGREE PROGRAMMES

No.	DEGREE	COURSE
1.	Ph. D. (Tech.) in Technology	Bioprocess Technology
2.		Chemical Engineering
3.		Speciality Chemical Technology
4.		Fibres and Textile Processing Technology
5.		Food Biotechnology
6.		Food Engineering and Technology
7.		Green Technology
8.		Nano Technology
9.		Oils, Oleochemicals and Surfactants Technology
10.		Perfumery and Flavour Technology
11.		Pharmacy@
12.		Pharmaceutical Technology
13.		Polymer Engineering and Technology
14.		Surface Coating Technology
15.		Plastic Engineering
16.		Civil Engineering
17.		Electrical Engineering
18.		Electronics Engineering
19.		Mechanical Engineering
20.	Ph. D. (Sci.)	Biochemistry
21.		Biotechnology
22.		Chemistry
23.		Food Science
24.		Mathematics
25.		Physics
26.		Textile Chemistry
27.	Ph. D. (Tech.)	Petrochemical Engineering

Intake Capacity: There is no prescribed intake capacity for any of the Doctoral Programmes/branches since the number of available fellowships and the requirement by the research supervisors varies every year. Several research projects, either funded by various government agencies or private industries, have provisions for fellowships.

Ph.D. (Tech) in Pharmacy is offered in four different branches:

(i) Pharmaceutics, (ii) Pharmaceutical Chemistry, (iii) Pharmacology and (iv) Pharmacognosy. Separate written tests will be conducted for each of the above branches. Candidates may appear for written tests in one or more of these and a separate merit list will be prepared for each.

Candidates admitted to Ph.D. (Tech.) in Technology (Sr. No. 1 - 14) conduct research under the recognized faculty from the Department of Chemical Engineering, all Departments of Chemical Technology, DBT-ICT Centre for Energy Bio-sciences and ICT-DAE Centre for Chemical Engineering Education and Research.

Candidates admitted to Ph.D. (Tech.) in Technology Sr. No. 15-19 conduct research under the recognized faculty from the Department of General Engineering.

There will be combined entrance test for (Sr. No. 21) and Ph. D. (Sci.) (Biochemistry) in Biochemistry (Sr. No. 20). Shortlisted Candidates will be eligible for admission to Ph.D. Science Biotechnology (Sr No. 21) and Ph. D. (Sci.) (Biochemistry) depending upon availability of fellowship.

Candidates admitted to Ph. D. (Sci.) in Food Science (Sr. No.23) conduct research under the recognized faculty from the Department of Food Engineering and Technology. [See Section 3.4.3.1]

Candidates admitted to Ph. D. (Sci.) in Mathematics (Sr. No. 24) conduct research under the recognized faculty from the Department of Mathematics.

Candidates admitted to Ph. D. (Sci.) in Physics (Sr. No. 25) conduct research under the recognized faculty from the Department of Physics.

Candidates admitted to Ph. D. (Sci.) in Textile Chemistry (Sr. No. 26) conduct research under the recognized faculty from the Department of Fibres and Textile Processing Technology. [See Section 3.4.3.1]

Note: A Single form has to be filled for Ph. D. (Sci.) (Biotechnology) (Sr. No.21) and Ph. D. (Sci.) (Biochemistry) (Sr. No.20). Candidates should mention Biotechnology/ Biochemistry on the Form.

3.4.2 FELLOWSHIPS FOR DOCTORAL PROGRAMMES

Candidates receiving fellowships from any source and doing Ph.D. are required to work for 8 hrs/week to carry out administrative, supervisory and teaching assistantship as directed by Guide, Head of the Department and Institute Authorities.

3.4.2.1 INSPIRE FELLOWSHIP FROM DEPARTMENT OF SCIENCE AND TECHNOLOGY (GOI)

First Rank holders in Bachelor's degree or Master's degree in Engineering/ Technology/ Pharmacy/Science of any UGC/ AICTE recognized Indian University or Institute/ Statutory Body in India can apply for award of INSPIRE FELLOWSHIP, a scheme of the Government of India to avail research grants for a period of five years for doing research leading to Ph.D. degree. The Bachelor's degree holders with INSPIRE FELLOWSHIP need to register for Integrated Ph.D. degree from the beginning of the research. Application format and necessary documents for application are available on the website <https://online-inspire.gov.in/> Eligible candidates should apply directly to DST and after getting provisional acceptance, they may be considered for admission at ICT, subject to fulfillment of other criteria.

3.4.3 ELIGIBILITY CRITERIA FOR THE ADMISSIONS:

3.4.3.1 (A) ELIGIBILITY CRITERIA FOR ADMISSION TO Ph. D. (Tech.)/Ph. D. (Sci.)

For Ph. D. (Tech.) Programme at Sr. No. 1 in Table 3.4.1 must have passed

- i) Bachelor degree (12+4) in Engineering/Technology/Pharmacy or equivalent thereto AND
- ii) Master's degree examination in the Chemical Engineering/Bioprocess Technology/ Chemical Technology (any branch at ICT)/Pharmacy/ Biotechnology/ Biochemical Engineering/ or any other UGC recognized university as equivalent there to with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).
- iii) From the academic year 2022-23, ICT will follow the rule of having 60% or 6.5 out of 10

GPA at both Bachelor's and Mater's levels while admitting doctoral students. CSIR or any other national level JRF will get relaxation of 5%.

For **Ph.D. (Tech.)** course at Sr. No. 2 in Table 3.4.1, the candidate must have passed the Master's degree examination in the Chemical Engineering/ Chemical Technology (any branch at ICT)/ Pharmacy/ Plastic Engineering of ICT/ [(M.E in Petrochemical Engineering/ Environmental Engineering) (Provided Bachelor Degree in Chemical Engineering)] or any other UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category). iii) From the academic year 2022-23, ICT will follow the rule of having 60% or 6.5 out of 10 GPA at both Bachelor's and Mater's levels while admitting doctoral students. CSIR or any other national level JRF will get relaxation of 5%.

For **Ph.D. (Tech.)** courses at Sr. No. 3, 4 and 7 -15 in Table 3.4.1, the candidate must have passed the Master's degree examination in the Chemical Engineering/ Chemical Technology (any branch at ICT)/ Pharmacy/ Plastic Engineering of ICT or any other UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For **Ph.D. (Tech.)** Programmes at Sr. No. 5 in Table 3.4.1 must have passed the

- i) Bachelor's degree (12+4) in Food Engineering and Technology or Biotechnology/ Food Biotechnology of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category) AND
- ii) Master's degree in Food Engineering and Technology/ Food Technology/ Biotechnology/ Food Biotechnology/ Food and Biochemical Engineering/ Chemical Technology (any branch at ICT)/ Chemical Engineering of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA 55% marks or equivalent CGPA in case of reserved category.

For **Ph.D. (Tech.)** Programmes at Sr. No. 6 in Table 3.4.1 must have passed the

- i) Bachelor's Programmes (12+4) in Food Engineering and Technology or equivalent thereto AND
- ii) Master's degree in Food Engineering/ Food Technology/ Food and Biochemical Engineering/ Chemical Technology (any branch at ICT)/ Chemical Engineering of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA 55% marks or equivalent CGPA in case of reserved category

For **Ph.D. (Tech.)** Programmes at Sr. No. 16-19 in Table 3.4.1, the candidate must have passed the Master's degree examination from any UGC recognized university as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved categorie).

Plastic Engineering/Material Science/ Civil/ Structural/ Environmental/ Civil and Water management/ Transportation Engineering/ Construction/ Construction Management/ Geotechnical/ Water Resources/ Electrical Engg/ Power Systems/ Control Systems/ Instrumentation and Control/ Power Electronics/ Electrical Machines and Drives/ Power and Energy systems/ Electronics/ Micro Electronics/ VLSI Design/ Embedded systems/ Electronics and Communication/ Mechanical/ Production/ Industrial/ Thermal/ Machine Design/ Machine Tols/ Automobile

For **Ph. D. (Sci.)** Programmes at Sr. No. 20 and 21 in Table 3.4.1, the candidate must have passed the Master's degree examination in any biological faculty of science of any university recognized by UGC with minimum of 55% marks or equivalent CGPA (50% MARKS OR EQUIVALENT CGPA in case of reserved category)

For **Ph.D. (Sci.)** Programmes at Sr. No. 22, 24 and 25 in Table 3.4.1, the candidate must have passed the Master's degree examination in the respective Subject of any University recognized by UGC with minimum of 55% marks or equivalent CGPA (50% marks or equivalent CGPA in case of reserved category).

For **Ph.D. (Sci.)** Programmes at Sr. No. 23 in Table 3.4.1, in Food Science the candidate must have passed the M. Sc examination in Food Science, Food Processing, Nutrition, Home Science, Post harvest Technology, Horticulture, Dairy Science, Biochemistry, Microbiology, Organic Chemistry of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For **Ph.D. (Sci.)** Programme at Sr. No. 26 in Table 3.4.1, in Textile Chemistry, the candidate must have passed the M. Sc. examination in Textile Chemistry/ Textile Clothing/ Life Sciences/ Biochemistry/ Microbiology/ Chemistry of ICT or of any University recognized by UGC with minimum of 55% marks or equivalent CGPA (50 % marks or equivalent CGPA in case of reserved category).

For **Ph.D. (Tech.)** Programmes at Sr. No. 27 in Table 3.4.1, the candidate must have passed the Master's degree examination in the Chemical Engineering / Chemical Technology (any branch at ICT)/ Plastic Engineering of ICT/ [(M.E in Petrochemical Engineering) (Provided Bachelor Degree in Chemical Engineering)] or any other UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

The candidates who have passed the Master's degree by Research of any University recognized by UGC may be considered for admission only if they hold fellowship from any recognized funding agency.

In addition, the candidates must undergo institutional written test and interview to qualify for admission through merit.

The candidates qualified in NET/ GATE/ GPAT/ CSIR/ DBT/ - JRF examinations or other equivalent examinations and holding valid fellowship will be preferred.

Apart from regular full time on- campus candidates, following candidates are also eligible for admission to Ph.D. (Tech.)/ Ph.D. (Sci.):

- (i) Permanent full time teachers of College/ Institute (See 3.4.3.1.B for details)
- (ii) Employees of National laboratories/ Government Institutions (See 3.4.3.1.C for details)
- (iii) Employees of Industry (See 3.4.3.1.D for details)

NOTE: The selection of all the candidates for Ph.D. (Tech.) including GATE/ GPAT- JRF qualified candidates shall be based on the score in the qualifying examination, performance in the written test and interview (if short listed in written test) conducted by the Institute. The entrance examination score conducted by ICT will remain valid for two academic years. The academic year in which the candidate had appeared for entrance examination and the next academic year.

However, persons qualified in NET-JRF/ CSIR-JRF/DBT-JRF and holding valid fellowship obtained from Government funding agencies such as DST, ICMR, UGC, CSIR, etc. are exempted from the entrance written Test. Admissions to such candidates are open throughout the academic year.

3.4.3.1 (B) ELIGIBILITY CRITERIA FOR TEACHERS FOR ADMISSION TO Ph. D. (Tech.)/ Ph. D. (Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.4.3.1. A above.

- a) The candidate should be a permanent teacher having full time teaching experience of at least two years in Degree College or five years in Junior college/ Diploma College/ Polytechnics (affiliated to statutory bodies). Candidate will have to submit No Objection Certificate from respective college/institute . Please see **ANNEXURE 1**
- b) Teachers who have been in the service of any Engineering and Technology College approved by the UGC/AICTE are entitled for registration for Ph. D. (Tech.) with the faculty of the ICT.

- c) Teachers who have been in the service of any Science College approved by the UGC are entitled for registration for Ph. D. (Sci.) with the faculty of the ICT.
- d) The college management should undertake the responsibility of releasing the candidate for course work, experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned teacher and his supervisor, which will be approved by the Head of Department/ Centre Co-ordinator. A bond in this regard should be signed and approved by the Vice Chancellor, ICT.
- e) Teachers can work in the ICT laboratories during vacations and holidays and after their office hours if they come from colleges in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Head of Department/ Centre Co-ordinator.
- f) A maximum period of 5 years extendable by 1 year will be allowed in case of teachers who carry out research part time but put in at least 3 months full time work in a year in the ICT labs. In such cases, part of the experimental work could be allowed to be done in their premises for which their management will provide them with necessary facilities. The characterization and other sophisticated analysis must be done in ICT. Exclusive theoretical work should be discouraged as much as possible to give the teachers a hands-on experience and to bring them into an environment of research. However, this will be left to the individual supervisor's discretion, who should take abundant precaution to avoid unethical practices.
- g) The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in peer reviewed international journals. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.
- h) Teachers registering themselves as Ph.D. student of ICT should not register any Masters students with themselves in his/her own college to avoid research by proxy. The candidate as well as his/her supervisor must give an undertaking, with a counter signature of the concerned principal to this effect to avoid degeneration of this novel concept into a Ph.D. by unscrupulous means.
- i) If the teacher intends to join the ICT on leave without pay for a period of three years, then the candidate may be eligible for the UGC fellowship under our SAP programme, provided he/ she successfully clears the Institutional entrance tests.
- j) All regular admissions criteria are applicable to these candidates and they must also do the course work required for Ph.D. programme.
- k) The candidates will have to submit affidavit as given in **ANNEXURE 2**

3.4.3.1 (C) ELIGIBILITY CRITERIA FOR CANDIDATES WORKING IN NATIONAL LABORATORIES/ GOVERNMENT INSTITUTIONS FOR ADMISSION TO Ph. D. (Tech.)/ Ph. D. (Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.4.3.1. A above. PhD candidate sponsored by industry should have total industrial experience of minimum two years after completion of Master's degree with GPA more than 7.

- a) The candidate should be a permanent employee working in National Laboratories/ Government Institutions having minimum 2 years of service. Candidate will have to submit No Objection Certificate from respective laboratory or government institution . Please see **ANNEXURE 1**

- b) The management of the organisation should undertake the responsibility of releasing the candidate for course work, experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned candidate and his supervisor, which will be approved by the Head of Department/ Centre Co-ordinator. A bond in this regard should be signed and approved by the Vice Chancellor, ICT.
- c) Such candidates can work in the ICT laboratories during vacations and holidays and after their office hours if they come from organisation in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Head of Department/ Centre Co-ordinator.
- d) The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in peer reviewed international journals. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.
- e) All regular admissions criteria are applicable to these candidates and they must also do the course work required for Doctoral programme.
- f) The candidates will have to submit affidavit as given in **ANNEXURE 4**

3.4.3.1 (D) ADMISSION FOR INDUSTRY -SPONSORED IN-HOUSE CANDIDATES TO Ph.D. (Tech.)/ Ph.D. (Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.4.3.1. A above.

Total industrial experience of minimum two years after his/her master's with GPA more than 7. It is not necessary that the experience is from the same industry who is sponsoring the candidate. However it should be an approved research laboratory as per ICT's procedure. Such candidate should be selected based on ICT's entrance test in the respective subject.

1. The candidate should have minimum 2 years of industrial experience. The candidate will have to submit No Objection Certificate from respective organisation. Please see **ANNEXURE-1**
2. Industry should have a well-equipped Research and Development and Quality Control laboratory with at least one Ph.D. employee working in the set up in the relevant area.
3. Industry is required to get recognition from ICT by the following procedure:
 - i. After receiving request from an industry, a Committee appointed by the Vice Chancellor, ICT will make a visit to the industry laboratory. The ICT appointed Committee will consist of Dean (RCRM) as Chairman with a Professor nominated by the Vice Chancellor and the Head of the Department in the area of proposed research.
 - ii. The committee will evaluate the activities and the competence of the R and D of industry following the guidelines of similar to those proposed by DSIR. All the expenses in connection with the visit will be borne by the industry concerned. The ICT committee will make recommendations to the Vice Chancellor, ICT for approval. The industry R and D will be recognized by the approval of the Vice Chancellor, ICT. In case the laboratory is already recognized by DSIR, the visit by ICT committee will not be necessary.
 - iii. Once the R and D laboratory is recognized by the ICT, the industry is required to

pay Rs. 5 lakhs for first four years (typical duration of Ph.D. work) and necessary contingency amount of Rs. 50,000/- per candidate per year (in the name of ICT, to be utilized by the Research Guide) for the conduction of the research activity. After four years, the renewal of the recognition will continue by payment of Rs. 1 lakh per year. Further, the industry should try to get recognition for their R and D set up from DSIR, based on the recommendation of the ICT appointed Committee.

4. During a year, an industry may nominate up to two employees (with required qualification) for registering for the doctoral degree at ICT under the supervision of ICT faculty.
5. The candidate is required to pay all the Ph.D. fees (over and above laboratory eligibility fees) as proposed by the ICT at appropriate time and will not be eligible for any fellowship. Also, the other requirements, like eligibility criteria, qualifying institutional tests (score is valid for two years for Industry -sponsored candidates), completion of course work, etc. need to be fulfilled by the industry candidate.
6. The candidates will have to submit affidavit as given in ANNEXURE 3

3.4.3.1(E) RULES AND ELIGIBILITY CRITERIA FOR ADMISSION TO DIRECT Ph.D. (Tech.)

Institute of Chemical Technology (ICT) has a proven track record in training high quality manpower and in conducting research in Chemical Engineering, Chemical Technology, Pharmacy and Allied sciences. In view of the need of attracting talented graduates to Research career in Engineering and Technology, and for enhancing the number of quality Ph.D.s, ICT has initiated a programme of Direct Ph.D. (Tech.) in Chemical Engineering, Chemical Technology. This programme is not available for Direct Ph. D. (Tech.) in Pharmacy.

The Direct Ph.D. (Tech.) Degree Programme is designed to identify candidates with strong potential for a career in Research and to Develop Human resources for the India's future needs in Chemical Engineering and Chemical Technology. The programme has the following objectives:

- (i) To provide avenues for Doctoral degrees to candidates with talent and aptitude for carrying out advanced research and development activities in Technology.
- (ii) To furnish a multidisciplinary, flexible and innovative Doctoral research programme with special emphasis on
 - (a) Acquisition of proficiency in research, knowledge, data generation and analysis, mathematical modelling, and management with sharpening skills in innovative experimental methods and problem-solving capabilities.
 - (b) Creation of a pool of young talented, dedicated and committed individuals with passion and involvement in pursuing research and development as a career.
 - (c) Inculcation of attitude, temper and outlook for developing social commitment as well as high level of scientific ethics and integrity.
- (iii) To disseminate the new knowledge in the form of publications, patents, theses, seminars and conferences. Efforts will also be made to help the society and the industry and hence the economy of the country.

Selection of Candidates:

- i. The candidate, applying for the Direct Ph.D. (Tech.) programme, must have a Bachelor's degree in Chemical Engineering or Chemical Technology with more than 65% marks or equivalent CGPA (60% marks or equivalent CGPA for candidates from reserved category) of ICT or from any accredited or AICTE recognized Engineering and Technology Institute. A valid GATE score is mandatory.

Selection Process:

- i. The candidates will be selected on the basis of an Institute level written test and an Interview.
- ii. The candidate must score a minimum of 50% in the written examination of the Institute to qualify for the interview.
- iii. The selection of the candidates shall be strictly on merit and on the basis of performance in the written test and interview conducted by the ICT.
- iv. The list of qualifying candidates will be prepared on the basis of marks in written test and Interviews in 70:30 ratio.

Course Work and Registration for Direct Ph.D. (Tech.):

- a) The registration of the candidate of Direct Ph.D. (Tech.) shall be initially for Master's degree in the same discipline until he/she completes the Course work.
- b) If CGPA of 7 is not achieved, the candidate will have to reappear for the exam. This is applicable for candidates admitted directly to the program and receiving NDF, national doctoral fellowship. Students will get the both degrees, master's as well as PhD after completion of PhD. The candidates will have to complete the course work of Master's degree in the same discipline with a minimum CGPA of 7.0 before change of registration to Ph.D. (Tech.) degree. Since the programme has an objective of developing best human resources in Research, it is essential that the selection of the candidates is done with utmost care. They are also emphasized about successful completion of the course work.
- c) The candidate may be permitted to carry the credits of equivalent course, work of at least two semesters, if it is completed in IITs/NITs/HBNI, or any other reputed Government/AICTE recognized Institution that has signed an MoU with ICT for transfer of credits, provided as the course work is certified by the competent authority of that Institution. Such candidates may be exempted from taking the respective course work required for the Ph.D. (Tech.) programme. These candidates should be encouraged to take 4 audit courses related to their own research topic.
- d) Direct Ph.D. (Tech.) candidates shall first register for Master's degree and only after successful completion of course work for Master's and in the month of April of second year their registration will be changed to Doctoral degree. The certificate for completion of course work will be mandatory for this.
- e) The Registration and review of progress of these candidates will follow the same procedures as for other Ph.D. (Tech.) candidates registered in the Institute.
- f) Any candidate who completes the course work as specified above and completes minimum of 1 year of Research project will be awarded the Master's degree in respective discipline, if he/she wishes to discontinue further research or fails to acquire requisite CGPA of 7.0 in Master's programme.
- g) Candidate having poor performance in the Master's course work (as given above) will not be registered for Ph.D. (Tech.) degree and may be allowed to submit a thesis on the basis of one year of research work to get Master's degree.
- h) On successful completion of the entire programme the candidate will be awarded both the degrees, respective Master's and Ph.D. (Tech.)(Dual Degree) at the end of the programme.
- i) Direct Ph.D. (Tech.) INSPIRE fellows will be given master's fellowship till 31st March of the second year. They will be given Provisional master's degree certificate to become eligible for the Ph.D. (Tech.) fellowship from April, 01 of the second year.

Course Work for Ph.D. (Tech.)/ Ph.D. (Sci.):

As per the UGC directives and the Ph.D. reforms initiated at ICT, following are the rules governing the course work for a Ph.D. degree programme:

1. All candidates registered at ICT for the Ph.D. degree will have to complete the requisite course work, preferably within the 1st year of Ph.D. Program.
2. Every Ph.D. candidate is required to complete course work of 18 credits from post graduate level courses. It includes mandatory 4 credit course in research methodology and a 2 credit course in research and publication ethics.
4. All the course work must be completed before submission of synopsis for the thesis.
5. The selection of the credit courses will be by mutual consultation between the Candidate and the Research Supervisor.
6. The candidate can select any courses offered by ICT that he/ she had not undergone earlier at ICT or elsewhere, either as credit courses by filling up appropriate form.
7. The candidate may choose to take the courses at Institute(s) other than ICT, provided there is an MOU signed between the Institute and ICT for transfer of credits.
8. The candidate may take online MOOC courses with specific prior approval from research guide and Dean, Academic Programmes by filling up the appropriate form.

3.4.4 APPLICATION PROCEDURE FOR Ph.D. PROGRAMMES

For admissions at the ICT for any of the Ph.D. courses, a candidate should apply online for admission applications. (website <http://ictmumbai.edu.in>). Click on Apply online for Admission 2022-2023.

3.4.4.1 ONLINE APPLICATION :

To Fill the online application form below steps are required:

Step: 1 » Personal Information

Date of birth, Mobile No, Address, Caste, Category Details, Scanned colour Photo (Must be less than 40 kb, format-.jpg/.jpeg).

Step: 2 » Education details starting Xth, XIIth/ Diploma, Graduation (if applicable)

Carefully select between options of Percent System or Grade System

Year of Passing of each degree should be carefully specified

Board of Examination decides the normalization factor, so specify correctly

Step: 3 » Entrance Exam Details

Select entrance exam in which you will appear

Enter Application Id, Mobile Number, Roll No, Enter Grade/ Percentage/ Percentile/ score/ Rank correctly

Step: 4 and 5 » Upload Scanned Documents

All mark sheets and certificates

Category/ caste document, migration, domicile certificate etc.

Step: 6 » Payment details for admission form

You can pay application form fee with online mode by using Credit/ Debit card or by Net Banking only.

After submitting the form, students can take a print of application form for their reference.

The candidate shall fill the appropriate application form/s, separate for each course of choice.

All the relevant entries in the application form must be completed. Incomplete forms will be rejected and no correspondence will be made in this regard.

Writing contact details such as permanent address, address for correspondence, Mobile No./ Telephone No./ and email address in the application form is essential. Do not leave any space blank.

The duly filled form along with ATTESTED PHOTOCOPIES of required certificates to

substantiate the claims made in their application form should be submitted online. The Admission application fees once paid is non-refundable and non-transferable under any circumstances. Incomplete applications shall be rejected without entering into any correspondence with the applicant.

The candidates seeking admission at the ICT must submit ATTESTED PHOTOCOPIES of all the documents as given in Table 3.4.4.3 below along with the application form.

Attachment of any certificates will not be accepted separately after submission of the application form.

The candidates belonging to the reserved categories will be required to submit The Caste Certificate, the Caste/ Tribe Validity Certificate as applicable at the time of submitting the application form, failing which the category claimed, will not be granted and the candidate will be treated as a General candidate.

The candidates shall not attach a copy of any other certificate which is not asked for, such as certificates for participation in sports, cultural activities, etc.

If the candidate produces any certificate, which is not in Marathi, Hindi or English language, authenticated Marathi, Hindi or English version of the same, duly attested by a Gazetted Officer shall also be produced.

For admissions at the ICT for all the Ph.D. Programmes, a candidate should fill appropriate application form(s) for the course to which he/she is seeking admission.

(Refer time schedule for each of the following stages displayed on ICT Notice Board and website www.ictmumbai.edu.in).

TABLE 3.4.4.3: DOCUMENTS TO BE ATTACHED WITH THE APPLICATION FORM FOR Ph.D. ADMISSIONS

Sr. No.	Type of Candidate	Attested true copies of documents to be attached along with application form
I	All Candidates	1. SSC (Std. X) marksheet, 2. HSC/HSSC (Std. XII) marksheet, 3. All marksheets of Bachelor's Course 4. Bachelor's degree certificate 5. All marksheets of Master's Course 6. Master's degree certificate 7. College Leaving/ Transfer certificate 8. Gap certificate
II	Backward class Candidates belonging to SC/ ST Categories	Caste certificate, Caste/ Tribe Validity certificate, as applicable. (In addition to the documents mentioned in Sr. No. I)
III	Backward class Candidates belonging to VJ/ DT (NT(A))/ NT(B)/ NT(C)/ NT(D)/OBC/ SBC categories (Maharashtra State candidates only)	Caste certificate, Caste/ Tribe Validity certificate, Non Creamy Layer Certificate valid up to 31 st March 2021. (In addition to the documents mentioned in Sr. No. I)
IV	Backward Class Candidates belonging to OBC Category	Caste Certificate issued by Central Government

Candidates are requested to visit the institute website for a detail time table as well as updates for the same. List of the eligible candidates for written test will be displayed on the website. Only eligible candidates will be allowed to appear for the written exam. Depending upon the required number of candidates, institute reserves right to call specific number of candidates for interview.

A merit list will be generated on the basis of written test.

3.4.5 RULES AND REGULATIONS ABOUT RESERVATION

Reservation in admission for SC/ST categories is applicable to all Ph.D. Programmes (all branches) as per the Maharashtra government norms (**APPLICABLE FOR WRITTEN TEST ONLY.**)

3.4.5.1 CASTE CERTIFICATE AND CASTE/ TRIBE VALIDITY CERTIFICATE.

- a) Caste Certificate: The candidates belonging to the backward class categories will be required to submit the Caste Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.
- b) Caste Validity Certificate: The candidates belonging to the SC/ST category will be required to submit the Caste/Tribe Validity Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.

3.4.6 FEES, CONCESSIONS, CANCELLATIONS AND REFUND

3.4.6.1 FEES PRESCRIBED:

Fee structure for Ph.D. Programmes at ICT for the academic year 2023-24

Sr. No.	Details	Fee for 1 st Year (Rs.)
1.	Library Deposit	5,000/-
2.	Fees	50,000/-
3.	Other Fees	40,000/- (Including Continegncy)
	TOTAL	95,000/-

Fees: Second Year Onwards Rs. 1,03,000/- p.a.

***Note: Contingency amount for Ph.D. Students admitted under various fellowships will be as per the norms of respective sponsoring funding agencies. These are only indicative figures and likely to be changed.**

Notes :

- a) For confirmation of seat allotted, all candidates have to submit Demand Draft/ Pay Order in favour of 'Institute of Chemical Technology, Mumbai', payable at Mumbai, of appropriate values as shown in above TABLE.
- b) Hostel Fees shall be charged additionally in case of candidates opting for hostel accommodation (the details are given in Section on Hostels).
- c) Vide letters no. जा.क्रं./स.आ.स.क/मु.श./व्या.प.आ./अ.जा.फ्रि.स्कॉ/2015-16@5012 dated 17th August, 2015 received from Assistant Commissioner, Social Welfare Department, Mumbai city and जा.क्रं./सकआ/शिक्षण/रतंसं/2015-16 nwUo 2164 dated 11th August, 2015 received from Joint Director, Social Welfare Department, Pune, "All reserved category students for Master and Ph.D. who are getting any fellowship are not entitled to get Freeship/Scholarship from Government of Maharashtra."

3.4.6.2 LIBRARY DEPOSIT

Library deposit received from the students shall be refunded after successful completion of the course or after cancelling the admission, subject to producing Original Receipt. Unless there is any recovery, no deduction shall be made from the Library deposit. However, the amount of Library deposit shall be credited to institute, if the candidate does not apply for refund, within 3 complete financial years after the student actually leaves the institution; or, within 3 complete financial years after the date of successful completion of the programme, whichever is earlier.

3.4.6.3 REIMBURSEMENT OF TUITION FEE:

Candidates claiming concession under the categories of EBC and sons and daughters for teaching and non-teaching staff of primary, secondary and higher secondary schools shall pay entire fee as applicable at the time of admission and subsequently candidates have to apply to the respective authorities for reimbursement of tuition fees. The quantum of reimbursement received by the institute from the concerned authorities shall be disbursed to the candidate.

3.4.6.4 CANCELLATION OF ADMISSION AND REFUND OF FEES:

Refund of tuition fee, development and other fees after cancellation of admission secured at ICT. Candidate who has been admitted to ICT may cancel admission by submitting an application in duplicate, in the prescribed Pro forma - E and request for refund of fees. The refund of fees as applicable shall be made in due course of time. It is made clear that such application for cancellations will be considered if and only if the admission has been confirmed by paying the prescribed tuition fee and other fees in full and by submitting all the necessary original documents. Refund shall be made after deduction of cancellation charges as shown below -

SR. NO.	SITUATION	REFUND
1	Request received within 15 days from the Date of Admission	Entire fee less Rs.1000/-
2	Request received between 16-30 days from the Date of Admission	Entire fee less one month fees

No refund after 30 days.

ALL RIGHTS REGARDING THE ADMISSIONS AT THE ICT ARE RESERVED WITH THE VICE CHANCELLOR, ICT.

3.5.1 POSTGRADUATE DIPLOMA IN CHEMICAL TECHNOLOGY MANAGEMENT

The ICT has a rich tradition of first generation entrepreneurs as its graduates. In order to groom our Ph.D. students into etiquettes of business management, a certificate course in Chemical Technology was started for the ICT students. This popular course is now converted into a PG Diploma Chemical Technology Management to give Ph.D. research students and industry personnel, an orientation in business and technology management of chemical industry and to sharpen entrepreneurship skills.

The course covers topics such as Chemical Technology Management, Product/Process Design and Development, Finance Management, Marketing management, Intellectual Property Rights (IPR) and other laws, Communication, HRD, Project Management, Team and Organization Management.

The course is run with the assistance of the UDCT Alumni Association, with several alumni and other experts from within and outside ICT, having vast experience. This is a one and a half year programme conducted on Saturdays and Sundays. The course commences in January, every year and the admission procedure may commence from October, every year (see website www.ictmumbai.edu.in).

Type No.	ELIGIBILITY AND TYPE OF CANDIDATE	SEATS
1.	Candidates registered for Ph.D. (Tech.)/ Ph.D. (Sci.) in ICT, and have spent at least a year in their Ph.D. programme	10
2.	Candidates registered for Ph.D. (Tech.)/ Ph.D. (Sci.) in any other University/ Institute of repute, and have spent at least a year in their Ph.D. programme	10

Type No.	ELIGIBILITY AND TYPE OF CANDIDATE	SEATS
3.	Industry- sponsored candidates working for not less than 3 years, having Master's degree in Chemical Technology/ Chemical Engineering/ Science/ Pharmacy/ Mathematics or any other equivalent course	10

Admission will be conducted on the basis of written test and interview (equal weightage).

In case the candidates from a particular type are not available, the seats may be transferred to other type of candidature on the basis of merit. Fees once paid shall not be refunded.

The **Postgraduate Diploma in Chemical Technology Management** (30 seats) is meant for candidates registered for Doctoral degree from the ICT or other institutes/Universities as well as for industry personnel.

PG Diploma in Chemical Technology Management	
Ph.D.- Registered Candidates	Industry Sponsored Candidates
Rs. 15,000/-	Rs. 45,000/-

All Rights regarding the admissions at the ICT are reserved with the Vice Chancellor, ICT.

3.5.2 CERTIFICATE COURSE IN SAFETY AND RISK MANAGEMENT

This course is designed for all post-graduate researchers in Engineering, Technology and Pharmacy in the Institute of Chemical Technology. It is also suitable for young professionals employed by the chemical and allied industries. It was started in 2015 for the benefit of the student community. Lectures are held in every semester on Saturdays only. Four eminent visiting faculty from industry /research / academia teach this course: Dr. L. M. Gantayet, Mr. Vijay Bhujle, Dr. S. A. Nadgouda and Prof. Kiran Kondabagil.

This course is subdivided into two levels: I (Basic) and II (Advanced). Basic Level I is mandatory in the first year, whereas Advanced Level II is optional. Students who score 80% or above in the Level I examination are eligible to study for Level 2.

At the Basic level, the topics taught are: Introduction to Safety and Risk Management; Material hazard - GHS MSD - physical hazard, toxic hazard and eco-toxicity; PSM elements; Hazard Evaluation Techniques - What-If, Checklist, HAZOP, FEMA; Hazard identification and assessment (Basic); Flammability and fire safety-extinguishers; SHE regulations in India-Factories act, water and environment act; Human elements in safety-behaviour safety; Laboratory safety; Basic OSH; Compliance to statutory safety audits; Biosafety.

Topics taught at the Advanced level are: Plant layout based on process safety & fire safety-fire hydrant system design; Management Practice in SHE in Plant Operation; Hazard assessment (Process safety, thermal safety, dust explosion); Safety in utilities; Storage, handling and transportation of hazardous substances; Environmental Impact Assessment; Emergency response plan. In the end, students will present a case study on relevant topics.

Eligible students will be awarded certificates upon course completion.

3.6 EXAMINATION PATTERN

3.6.1 SEMESTER EXAMINATIONS

3.6.1.1 EXAMINATION SCHEDULE:

All the courses at Bachelor's and Master's level are Semesterised and credit based from 2009-10. There is a continuous evaluation of the students on grade basis through internal assessment. For B.Chem.Engg./ B.Pharm./ B.Tech./ M.Chem.Engg./ M.Pharm./ M.Tech./ M.E.(Plastic Engg.)/ M.Sc. (by papers), the Odd semester (Semester-I, III, V and VII) examinations shall be held in the month of December/ January and Even. Semester (Semester-II, IV, VI and VIII)

examinations in the month of April/May every year.

Students are advised to read the Regulation R-9, given below, carefully.

3.6.1.2 APPLICATION FORMS:

The application form for appearing the examination/s, must be submitted to the Accounts Section along with prescribed fees before the specified dates, which are notified well in advance on the ICT Notice Board. Examination forms will be accepted after the last date only up to one week with late fees. Thereafter, it is not obligatory for the institute to accept the forms.

3.6.1.3

No examination form shall be accepted unless the examination fee is fully paid in cash.

3.6.1.4

Master's courses (Regular 2 years) have theory courses in Semester-I and II.

3.6.1.5

Students will have to follow the same procedure of applying for admission to the examination in the subjects selected by them for credit courses during the respective examination schedule. Doctoral students are therefore required to submit the list of their choice of Credit and Audit courses with clear mention of course, semester and subject code within 15 days of their admission to the Academic Office. The form may be downloaded from ICT intranet.

Candidate can apply for change of credit/ audit course(s) through his/her Ph. D. supervisor and the Head of the Department to Dean (AP) within the first two weeks of start of academic session. Decision taken by Dean (AP) will be binding on student.

3.6.1.6 REPEAT SEMESTER EXAMINATIONS (REGULATION R-14):

To provide an avenue to improve the performance of the students, a provision of repeat semester examination is made. These examinations for Bachelor's and Master's courses are generally held within a month after declaration of the results of regular semester examinations. Those who want to take repeat examinations should apply for the same with the necessary fee in a stipulated period; notice for the same shall be displayed on the ICT Notice Board.

3.6.1.7

There is a provision of amendment of result of an examination (Regulation R-13). For these, separate applications should be submitted to the office within the prescribed time.

3.6.1.8

The students undergoing theory courses at all levels (UG, Master's and Ph.D.) may please note that a provision exists for them to see their assessed answer books for Continuous Evaluations, Mid-Semester and Final Semester examinations. They may discuss their marks obtained with the concerned teacher within 3 days after a notice is put up by the teacher displaying the marks awarded, with prior appointment at the convenience of the teacher.

3.6.2 REGULATION RELEVANT TO EXAMINATION

R.9 Credit System and Mode of evaluation

1. Introduction

All the courses at ICT are credit based and the evaluation is grade based.

Credit system is a systematic way of describing an educational programme by attaching credits to its components. The definition of credits may be based on different parameters, such as student workload, learning outcomes and contact hours. It is a student-centric system based on the student workload required to achieve the objectives of a programme. It should facilitate

academic recognition of the courses and mobility of the students. Credits assignment is based on the principle that Credits can only be obtained after successful completion of the work required and appropriate assessment of the learning outcomes achieved. As per the AICTE norms 2L/week of lectures are 2 credits, while 2h/week of practicals/tutorials are 1 credit. This may be taken as the basis.

Student workload consists of the time required to complete all prescribed learning activities such as attendance at lectures/practicals, seminars, projects, etc. Credits are allocated to all the educational components of a study programme and indicate the quantity of work each component requires to achieve its specific objectives.

Evaluation is an important component of any teaching-learning process. The Institute gives emphasis on continuous evaluation with considerable freedom to the teacher in deciding the mode of evaluation of the students. The performance of the student is documented by a grade at the end of the semester. The grading scale ranks the students on a statistical basis. Therefore, statistical data on student performance is a prerequisite for applying the grading system.

2. Course Credits

In general a certain quantum of work measured in terms of credits is laid down as the requirement for a particular degree. The student acquires credits by passing courses every semester, the amount of credit associated with a course being dependent upon the number of hours of instruction per week in that course.

There are mainly two types of courses in the Institute - lecture courses and laboratory courses. Lecture courses consist of lecture (L) and tutorial (T) hours. Laboratory courses consist of practical (P) hours. The credit (C) for a course is dependent on the number of hours of instruction per week in that course, as given below:

- (1) 1h/week of lecture (L) or tutorial (T) = 1 credit
- (2) 2h/week of Practicals (P) = 1 credit
- (3) Credit (C) for a theory course = No. of hours of lectures per week + No. of hours of tutorials per week = L + T
- (4) Credits (C) for a Laboratory course = $\frac{1}{2}$ x No. of hours of laboratory course per week

Credits will be assigned to In-plant, Seminar, Projects and other mandatory course requirements also and these will be mentioned in the respective syllabi. There may be some non-credit requirements. A student is required to earn credits as mentioned in the syllabus.

3. Evaluation

3.1 Weightages of different modes of assessments shall be as under.

Credit System and Mode of Evaluation*

	In-Semester evaluation		End-Semester-Exam	Components of continuous mode
	Continuous mode	Mid Semester-Exam		
Theory	20%	30%	50%	Quizzes, class tests (open or closed book), home assignments, group assignments, viva voce assignments, discussions
Practicals	50%	-	50%	Attendance, viva -voce, journal, assignments, project, experiments, tests

* Subject to change

3.2 In-Semester Evaluation:

- a. It is expected that the teacher would conduct at least two assessments under the continuous mode in a Semester.
- b. The teacher will announce at the beginning of the respective course the method of conducting the tests under the continuous mode and the assignment of marks
- c. In-semester performance of all students should be displayed and sent to the academic office by the teacher at least 15 days before the end-semester examination.
- d. For the theory courses, there will be one mid-semester test for each course to be held as per the schedule fixed in the Academic Calendar.
- e. For mid -semester examinations in theory papers, duration of examination will be 1 hour for 3 credit courses and 2 hours for 4 credit courses.

3.3 End-Semester examination:

- a. The End- semester examination will cover the full syllabus of the course and will be conducted as per the Institutional time table at the end of each semester.
- b. For End- semester examinations in theory papers, duration of examination will be 1 hour for 3 credit courses and 2 hours for 4 credit courses

3.4 Passes and Failures

- a. The candidates who obtain 40% and more marks of the total marks of a subject head shall be deemed to have passed the respective subject head.
- b. The candidates who obtain marks less than 40% of the total marks of a subject head shall be deemed to have failed in the respective subject head (Grade FF).

3.5 Grades:

- a. The performance of a student shall be documented by a Letter grade. Each letter grade has a Grade point associated with it. The Grades and Grade points shall be assigned to each head of passing and both will be indicated in the mark-list of the semester examination.
- b. The total marks (in-semester + end-semester) of a candidate in a subject head are converted into a letter grade, based on the relative (and sometimes the absolute) performance of the student.

Letter Grade	Grade Point
AA	10
AB	9
BB	8
BC	7
CC	6.5
CD	6
DD	5.5
EE	5

- c. In view of our elite status 6 out of 10 CGPA will be first class. Thus (CGPA x 10) formula will be used to calculate % and class Repeat examination in Practicals subject is permitted to the students in the following cases:
1. Candidate has obtained 50% marks in Continuous Assessment and appeared for regular End semester practical examination and Failed. (Continuous Assessment here means attendance, submission and evaluation of journals, assignments).
 2. Candidate has obtained 50% marks in Continuous Assessment and could not appear for regular End Semester practical examination due to valid Medical reason and or family bereavement. (Continuous Assessment here means attendance, submission and evaluation of journals, assignments).
 3. The candidates not fulfilling above two criteria will be given year drop.
Distinction, (70%)
First Class (60-69.99)
Second Class (50-59.99)
will be used like old ICT cut-out marks.
- d. The grades to be allotted in the case of students who fail or do not appear at the end-semester examination shall be as under.

Letter Grade	Grade Point	Explanation
FF	0	The candidate fails in subject head. The candidate will be allowed to take end-semester repeat or subsequent examinations as per rule.
XX		The candidate has not kept term for the subject head due to attendance less than requisite. Further see 3.5(h) below. In the above cases, the candidate has to repeat the respective course by paying the fees.
I	0	The candidate has kept term for the subject head, has taken all the internal examinations with satisfactory performance, but has failed to take the end-semester examination or repeat examination due to genuine reasons. The candidate will be allowed to take end-semester repeat or subsequent examinations as per rule.

Letter Grade	Grade Point	Explanation
FR	0	The candidate has exhausted all the permissible chances to clear the end semester examinations. The candidate has to register for the respective semester again for all the subject heads or will be out of the respective degree course as per the rules.
DR	0	(i) The candidate hasn't participated in academic programme. (ii) The candidate has taken a drop for the subject head; - provided he/she intimates the same (i or ii) at least 7 days in advance of the commencement of the end-semester examination for the respective year.

- e. Grades FF and I are place-holders only and do not enter into CPI/SPI calculations directly. These grades get converted to one of the regular grades after the end-semester examination.
- f. A candidate with an FR grade is not eligible for any repeat examination in that course and has to re-register for that semester by paying the appropriate fees.
- g. The grade I will not be continued beyond the permissible number of end-semester/repeat examinations [Refer to current Regulation R.9 (9) and R.9 (10)]. In the six consecutive exams conducted by the institute, irrespective of whether the candidate fails to take any of these exams.
- h. 'XX' Grade: The grade XX in a course is awarded if - (i) candidate does not maintain the minimum 75% attendance in the Lecture/Tutorial/Practical classes, (ii) candidate receives less than 20% of the combined marks assigned for continuous assessment and mid-semester examination, and (iii) candidate indulges in a misconduct/uses unfair means in the examination, assignments, etc., of a nature serious enough to invite disciplinary action in the opinion of the teacher.
(Note: Award of the XX grade in the case of h (iii) above shall be done by Disciplinary Action Committee (DAC)).
- i. The names/roll numbers of students to be awarded the XX grade should be communicated by the teacher to the Academic office as per academic calendar before the last date of submission of the application for end-semester examination.

3.6 Awarding the Grades

The grading scale ranks the students statistically on the basis of the overall performance of the students of a given class in the given subject head. Therefore, statistical data on students' performance is a prerequisite for applying the grading system. While assigning grades in a given subject head, it is essential to know the average marks (AM) obtained by the students who have passed the subject head and the highest marks (HM) obtained in the same subject head.

1. If the average marks (AM) obtained by the students who have passed the subject head is <60%, the interval AM shall be awarded grade CC and the other grades shall be decided as follows:
 - i. AA, AB, BB, and BC grades shall be decided between the AM and HM by dividing the range in equal intervals.
 - ii. CD, DD and EE grades shall be decided between the AM and minimum marks required for passing the head (i.e. 40%) by dividing the range in equal intervals.
2. If the average marks (AM) obtained by the students who have passed the subject head is such that $60\% \leq AM < 70\%$, the interval AM shall be awarded grade BC and the other grades shall be decided as follows:
 - i. AA, AB, BB grades shall be decided between the AM and HM by dividing the range

- in equal intervals.
- ii. CC, CD, DD and EE grades shall be decided between the AM and minimum marks required for passing the head (i.e. 40%) by dividing the range in equal intervals.
3. If the average marks (AM) obtained by the students who have passed the subject head is ³70%, the interval AM shall be awarded grade BB and the other grades shall be decided as follows:
 - i. AA and AB
 - ii. BC CC, CD, DD and EE grades shall be decided between the AM and minimum marks required for passing the head (i.e. 40%) by dividing the range in equal intervals.
 4. SPI and CPI
 - a) Semester Performance Index (SPI): The performance of a student in a semester is indicated by Semester Performance Index (SPI), which is a weighted average of the grade points obtained in all the courses taken by the student in the semester and scaled to a maximum of 10. (SPI is to be calculated up to two decimal places.)
A Semester Grade Point Average (SGPA) will be computed for each semester as follows:
Where
'n' is the number of subjects for the semester,
'ci' is the number of credits allotted to a particular subject, and
'gi' is the grade-points awarded to the student for the subject based on his performance as per the above table.
SGPA will be rounded off to the second place of decimal and recorded as such.
 - b) Cumulative Performance Index (CPI): An up to date assessment of the overall performance of a student from the time he entered the Institute is obtained by calculating Cumulative Performance Index (CPI) of a student. The CPI is weighted average of the grade points obtained in all the courses registered by the student since he entered the Institute. CPI is also calculated at the end of every semester (upto two decimal places).
Starting from the first semester at the end of each semester (S), a Cumulative Grade Point Average (CGPA) will be computed as follows:
Where
'm' is the total number of subjects from the first semester onwards up to and including the semester S,
'ci' is the number of credits allotted to a particular subject, and
'gi' is the grade-points awarded to the student for the subject based on his performance as per the above table.
CGPA will be rounded off to the second place of decimal and recorded as such.
 - c) The CGPA, SGPA and the grades obtained in all the subjects in a semester will be communicated to every student at the end of every semester/ beginning of the next semester.
 - d) When a student gets the grade 'FF' or 'I' in any subject head during a semester, the SGPA and CGPA from that semester onwards will be tentatively calculated, taking only 'zero' grade point for each such 'FF' or 'I' grade. When the 'FF' grade(s) has/ have been substituted by better grades after the repeat examination or subsequent semester examination, the SGPA and CGPA will be recomputed and recorded.
 5. Repeat End-Semester Examination
 - 5.1 For those candidates who fail in a subject head or are eligible for appearing at the

repeat examination, Repeat End-Semester Examination will be conducted within one month from the declaration of the results of regular end-semester examination, as per Regulation R.14.

- 5.2 The marks obtained by candidates in the in-semester examinations (continuous assessment and periodic test) will be carried forward in such cases.
- 5.3 Grading the performance in the Repeat Examination: The grades will be assigned as per 3.5 and 3.6 above. However, for a candidate taking any repeat examination or subsequent regular semester examination or performance improvement examination shall be awarded one grade lower than that decided on the basis of the actual marks obtained; provided 'EE' grade obtained in such an examination shall remain 'EE'. For reference see the table below.

Grade obtained in repeat or subsequent end-semester examination	Grade to be assigned	Grade point
AA	AB	9.0
AB	BB	8.0
BB	BC	7.0
BC	CC	6.5
CC	CD	6.0
CD	DD	5.5
DD	EE	5.0
EE	EE	5.0

- 5.4 End-semester and repeat examination: Candidate's performance in these examinations will be displayed on proper notice board and after 3 days of such display the marks will be sent to the Academic Office. No revaluation of these examinations will be allowed.
- 6. Passing of a Semester examination
A candidate shall be declared as 'PASSED' any semester examination if he/she has
 - a. Cleared all heads of passing by securing grades EE or higher in all the heads;
 - b. Passed all the heads of passing such as project, seminar, training, etc as per the rules;
 - c. Satisfactorily completed all the mandatory requirements of the course;
 - d. Paid all the Institute dues;
 - e. No case of indiscipline pending against him/her.
- 7. Eligibility for the Award of a Degree
A candidate shall be declared eligible for the award of a degree, if he/she has cleared all the semester examinations as given in (6) above.
- 8. Allowed to keep terms (ATKT)
 - 8.1 A candidate who has I grade in one or more heads of passing of an odd semester of an academic year shall be allowed to keep terms for the respective even semester.
 - 8.2 A candidate shall be allowed to keep terms for the subsequent academic year if he/she has FF or I grades in not more than two heads of passing from all the heads of passing of the two terms of the previous academic year taken together. Such a candidate shall be declared as FAILED, ATKT.
 - 8.3 A candidate who has not cleared Semester-I and II as per clause 6 above shall not be eligible to register for semester-V and VI.
 - 8.4 A candidate who has not cleared Semester-III and IV as per clause 6 above shall not be eligible to register for semester-VII and VIII
- 9. Repeating a course
 - 9.1 A student is required to repeat the course of a subject head under the following

situations:

- (a) A student who gets an XX, FR, or DR grade in a course; or
 - (b) A student has exhausted all permissible chances to clear the subject head.
- 9.2 A candidate from second, third and fourth years who remains absent for the regular end-semester examination of a semester and the corresponding repeat examination for ALL SUBJECTS shall have to take fresh admission for the corresponding year; unless the candidate has dropped out/ terminated from the course.
- 9.3 If a candidate at the Second, Third or Fourth year fails to pass any semester examination in not more than 4 consecutive examinations, including the repeat examinations, from the date of registering for the respective year, the candidate shall have to take readmission for the corresponding year again in which the failure has occurred, provided the course is not changed.
10. Improvement of performance
- A candidate will be allowed to appear at the entire examination after the regular end-semester examination as per the respective rules to improve the performance. In such a case if the result of the examination repeated -
- 1. Is better than the previous one, the previous result shall be declared null and void; and
 - 2. Is worse than the previous one, the result of the subsequent examination shall not be declared.
 - 3. However, awarding of final grade will be made under the provision of sub clause 5.3 above.
11. Exit Rules for poorly performing students
- A candidate shall be excluded from a course under the following conditions:
- a. If he/she does not keep two consecutive terms without giving any reasonable justification (as prescribed by the institute) for doing so.
 - b. If he/ she fails to fulfill all the requirements of his/her respective degree within the prescribed period from the date of taking admission to the course.
12. Miscellaneous
- c. Although CPI will be given in the Semester grade report, the final degree certificate will not mention any Class whatsoever.
 - d. Notwithstanding anything said above, if a course is revised/restructured then transient provisions applicable at the time of revision/restructuring shall be applicable.

3.6.3 REGULATION R-13 (AMENDMENT OF RESULTS)

In rare cases the result of a candidate might be wrongly represented due to errors inadvertently committed by the persons involved in the preparation of the results. Such a wrong representation is also possible due to intentional tampering with the results. The regulations below are meant for correcting the results under such conditions, when revealed.

(A) Amendment of result with errors

- (1) In case where it is found that the result of an examination has been affected by errors, the Controller of Examination shall have the power to amend such result in such a manner as shall be in accordance with the true position and to make such declaration as is necessary, with the necessary approval of the Dean (Academic Programmes), Provided the errors are reported/detected within 6 months from the date of declaration of results. Errors detected thereafter shall be placed before the UGPC or PGPC, as the case may be.

- (2) Error means-
 - i) Error in computer/date entry, printing or programming and the like
 - ii) Clerical error, manual or machine, in totaling or entering of marks on ledger/register
 - iii) Error due to negligence or oversight of examiner or any other person connected with evaluation, moderation and result preparation.
- (B) Amendment of result affected by fraud, malpractices, etc.

In any case where the result of an examination has been ascertained and published and it is found that such result has been affected by any malpractices, fraud or any other improper conduct whereby an examinee has benefited and that such examinee, and in the opinion of the UGPC or PGPC, as the case may be, been party of privy to or connived at such malpractice, fraud or improper conduct, the UGPC or PGPC shall have the power at any time notwithstanding the issue of the Certificate or the award of a Prize or Scholarship, to amend the result of such examinee and to make such declaration as the UGPC or PGPC considers necessary.

3.6.4 REGULATION R-14 (REPEAT SEMESTER EXAMINATION)

Repeat semester examination is a special feature of the examinations at the Institute. It provides an avenue for the students, who do not perform well in the main semester examination. A repeat examination therefore should be conducted immediately after the main examination.

- (1) For each regular semester examination, one repeat semester examination shall be provided.
- (2) A repeat semester examination shall be equivalent in all respect to the corresponding regular semester examination.
- (3) A repeat semester examination should commence after 15 days from the date of declaration of the results of verification of marks; preferably within one month from the date of declaration of the semester examination results.
- (4) The time tables for the repeat examinations shall be put up immediately after the declaration of the results of the regular semester examinations.
- (5) The candidates who have failed, or have got ATKT, or have obtained less than 50% marks in one or more subject heads and desire to improve the performance may be permitted to appear at the repeat examination.
- (6) The last date of submission of application forms for the repeat examination shall be minimum two days after the declaration of the results of the verification of marks.
- (7) The rules for the conduct of the repeat examination shall be the same as the regular semester examination.
- (8) The result of a repeat examination of a candidate shall override the respective result of the regular examination.

Repeat Practical Examination

Repeat examination in practical subject is permitted to the students in the following cases:

- (1) Candidate has obtained 50 % marks in Continuous Assessment and appeared for regular End Semester practical examination and Failed. (Continuous Assessment here means attendance, submission and evaluation of journals, assignments).
- (2) Candidate has obtained 50 % marks in Continuous Assessment and could not appear for regular End Semester practical examination due to valid Medical reason and/ or family bereavement. (Continuous Assessment here means attendance, submission and evaluation of journals, assignments).
- (3) The candidates not fulfilling the above two criteria shall get a Year Drop.

3.6.5 WORK PRACTICE OR IN-PLANT TRAINING

The Regulations require that the B. Chem. Eng. and B.Tech. students work for at least twelve weeks, while the B. Pharm. Students work for at least four weeks, in approved industries at the end of the third year of the respective courses (i.e. at the end of the sixth semester) and to submit a satisfactory report to the Head of the department. The Heads of Department normally arrange for the placement of the students for the works practice.

3.6.6 MALPRACTICE AT THE EXAMINATION (REGULATION R-16)

Very strong action will be taken against students using, attempting to use, aiding, abetting, instigating or allowing using “unfair means” at the examination. This will be reported to the Unfair Means Inquiry Committee and the action taken by the Vice Chancellor shall be final.

3.7 ELIGIBILITY, ENROLLMENT AND TRANSFER/ LEAVING/ MIGRATION CERTIFICATES

(Applicable only to the candidates who have been offered seats)

3.7.1 TRANSFER CERTIFICATE

A student admitted to the ICT is required to submit within a month from the commencement of the term, a Transfer Certificate/ Leaving Certificate/ Migration Certificate from the Principal of the College last attended by him/ her.

3.7.2 PROVISIONAL STATEMENT OF ELIGIBILITY

No student from other University/ Board can be admitted to any of the ICT courses without submission of a “Provisional Statement of Eligibility” to be procured from the ICT office. An application for a provisional statement of eligibility may be made only when a student is informed that he/ she is allotted a seat in the ICT. However, candidates should keep all the necessary documents, such as statement of marks, passing certificate, migration certificate, etc., ready for obtaining the provisional statement of eligibility. The provisional eligibility will be confirmed only after due verification of the statement of marks and passing certificate from the candidate’s parent University/ Board. The charges levied by the parent University of the Student for this purpose will have to be borne by the concerned candidate. The information regarding equivalence of examinations may be obtained from the Assistant Registrar (Academic) of the ICT.

IMPORTANT INSTRUCTIONS

The ICT does not recognize degrees from overseas Universities/ Boards, on a regular basis. However, candidates desirous of seeking admission to the ICT, on the basis of qualifications obtained in overseas Universities/Boards may be considered for the admission on the merits of each individual case. For this purpose, passing certificates, transcripts of record and a copy of the syllabus, containing the details of the courses of studies pursued in the various subjects at the examination passed by the applicant (duly countersigned by the High Commissioner of India in the country or the officer authorized by him) and standard of passing laid down at the examination should be forwarded to the office well in advance. In case the certificates or transcripts are in a language other than English, these certificates and the English translation of the same, duly certified by a competent authority, should be sent. The candidate should enclose all the permissions stipulated by the concerned Government Departments.

3.7.3 ENROLLMENT CERTIFICATE

The students admitted after passing the XII standard (HSC/HSSC) Examination are required to submit to the ICT the duly filled in enrollment form, along with a copy of Statement of Marks

and the prescribed fee at the time of admission. The enrollment form can be obtained from the office of the ICT.

3.8 ACADEMIC YEAR, CODE OF CONDUCT AND DISCIPLINE

3.8.1 COMMENCEMENT OF ACADEMIC YEAR*

The date of commencement of the first semester of the academic year 2023-2024 shall be as per academic calendar 2023-2024.

The academic calendar for all the Bachelor's and Master's courses is divided into two semesters.

3.8.2 ACADEMIC CALENDER 2023-24*

INSTITUTE OF CHEMICAL TECHNOLOGY				
ACADEMIC CALENDER 2023-24				
			Start Date	End Date
A) ODD SEMESTER				
	UG1, UG2a-g, UG3	Sem I	TBA	TBA
		SemIUG3	TBA	TBA
		Sem III	Monday, August 14, 2023	Saturday, December 23, 2023
		Sem V	Monday, July 3, 2023	Saturday, November 11, 2023
		Sem VII-IP	Monday, May 8, 2023	Saturday, August 12, 2023
		Sem VII	Monday, August 14, 2023	Saturday, December 23, 2023
	PG1-14 & 19	Sem I	Monday, July 31, 2023	Saturday, December 9, 2023
		Sem III	Monday, July 3, 2023	Saturday, December 30, 2023
	PG15-18 (Msc)	Sem I	Monday, July 31, 2023	Saturday, December 9, 2023
		Sem III	Monday, July 3, 2023	Saturday, November 11, 2023
Diwali Vacation Nov 11, 2023 to Nov 15, 2023 (25 th Nov will carry Monday timetable in lieu of 13 th)				
MIDSEMESTER EXAMINATIONS				
	UG1,UG2a-g, UG3	Sem I	TBA	TBA
		SemIUG3	TBA	TBA
		Sem III	Monday, October 9, 2023	Saturday, October 14, 2023
		Sem V	Monday, August 28, 2023	Saturday, September 2, 2023
		Sem VII	Monday, October 9, 2023	Saturday, October 14, 2023
	PG1-11 & 14	Sem I	Tuesday, October 3, 2023	Sunday, October 8, 2023
	PG15-18 (MSc)	Sem I	Tuesday, October 3, 2023	Sunday, October 8, 2023
		Sem III	Monday, August 28, 2023	Saturday, September 2, 2023
END SEMESTER EXAMINATIONS				
a) Theory				
	UG1,UG2a-g, UG3	Sem I	TBA	TBA
		SemIUG3	TBA	TBA
		Sem III	Monday, December 11, 2023	Saturday, December 16, 2023
		Sem V	Monday, October 30, 2023	Saturday, November 4, 2023
		Sem VII	Monday, December 11, 2023	Saturday, December 16, 2023

INSTITUTE OF CHEMICAL TECHNOLOGY				
ACADEMIC CALENDER 2023-24				
			Start Date	End Date
	PG1-11 & 14	Sem I	Tuesday, November 28, 2023	Sunday, December 3, 2023
	PG15-18 (MSc)	Sem I	Tuesday, November 28, 2023	Sunday, December 3, 2023
		Sem III	Monday, October 30, 2023	Saturday, November 4, 2023
b) Practical including Projects				
	UG1,UG2a-g, UG3	Sem I	TBA	TBA
		SemI UG3	TBA	TBA
		Sem III	Monday, December 18, 2023	Saturday, December 23, 2023
		Sem V	Monday, November 6, 2023	Saturday, November 11, 2023
		Sem VII	Monday, December 18, 2023	Saturday, December 23, 2023
	PG1-14 & 19	Sem I	Tuesday, December 5, 2023	Saturday, December 9, 2023
		Sem III	Monday, December 18, 2023	Saturday, December 30, 2023
	PG15-18 (Msc)	Sem I	Tuesday, December 5, 2023	Saturday, December 9, 2023
		Sem III	Monday, November 6, 2023	Saturday, November 11, 2023
c) Evaluation & Results : Within 28 Days after examinations				
B) EVEN SEMSTER				
	UG1,UG2a-g, UG3	Sem II	TBA	TBA
		SemIIUG3	TBA	TBA
		Sem IV	Monday, January 1, 2024	Saturday, May 11, 2024
		Sem VI	Monday, December 4, 2023	Saturday, April 20, 2024
		Sem VIII	Monday, January 1, 2024	Saturday, May 11, 2024
	PG1-11 & 14	Sem II	Monday, December 18, 2023	Saturday, June 29, 2024
		Sem IV	Monday, January 1, 2024	Saturday, June 29, 2024
	PG15-18 (MSc)	Sem II	Monday, December 18, 2023	Saturday, June 29, 2024
		Sem IV	Monday, December 11, 2023	Saturday, June 29, 2024
MIDSEMESTER EXAMINATIONS				
	UG1,UG2a-g, UG3	Sem II	TBA	TBA
		SemIIUG3	TBA	TBA
		Sem IV	Monday, February 26, 2024	Saturday, March 2, 2024
		Sem VI	Monday, February 12, 2024	Saturday, February 17, 2024
		Sem VIII	Monday, February 19, 2024	Saturday, February 24, 2024
	PG1-11 & 14	Sem II	Monday, February 19, 2024	Saturday, February 24, 2024
		Sem II	Monday, February 12, 2024	Saturday, February 17, 2024
	PG15-18 (MSc)	Sem IV	Monday, February 12, 2024	Saturday, February 17, 2024
END SEMESTER EXAMINATIONS				
a) Theory				
	UG1,UG2a-g, UG3	Sem II	TBA	TBA
		SemIIUG3	TBA	TBA
		Sem IV	Monday, April 29, 2024	Saturday, May 4, 2024
		Sem VI	Monday, April 8, 2024	Saturday, April 13, 2024
		Sem VIII	Monday, April 29, 2024	Saturday, May 4, 2024

INSTITUTE OF CHEMICAL TECHNOLOGY				
ACADEMIC CALENDER 2023-24				
			Start Date	End Date
	PG1-11 & 14	Sem II	Monday, April 29, 2024	Saturday, May 4, 2024
		Sem II	Monday, April 29, 2024	Saturday, May 4, 2024
	PG15-18 (MSc)	Sem IV	Monday, April 29, 2024	Saturday, May 4, 2024
b) Practical including Projects				
	UG1,UG2a-g, UG3	Sem II	TBA	TBA
		SemIIUG3	TBA	TBA
		Sem IV	Monday, May 6, 2024	Saturday, May 11, 2024
		Sem VI	Monday, April 15, 2024	Saturday, April 20, 2024
		Sem VIII	Monday, May 6, 2024	Saturday, May 18, 2024
	PG1-11 & 14	Sem II	Monday, May 6, 2024	Saturday, May 11, 2024
		Sem IV	Monday, June 17, 2024	Saturday, June 29, 2024
	PG15-18 (MSc)	Sem II	Monday, May 6, 2024	Saturday, May 11, 2024
		Sem IV	Monday, May 6, 2024	Saturday, May 11, 2024
c) Evaluation & Results: Within 28 Days after examinations				

d) Student events and Non Academic Days (continues on following saturday)

1. Friday 22nd Dec 2023- Vortex Day 1 (Event 22-25 Dec 2023)
2. Thursday 1st Feb 24 - Manzar Day 1 (Event 1-4 Feb 2024)
3. Friday 2nd Feb 24 - Manzar Day 2
4. Friday 15th March 24 - Sports Saga Day 1
5. Monday 8th Jan 2024 - Funtech

3.8.3 REQUIREMENT OF ATTENDANCE

The attention of the students is drawn to the Regulation R-1 regarding the attendance of the student and Grant of Term. Biometric attendance system is adopted for all classrooms and lectures are recorded. An auto-generated message is sent to the student and his/her registered parent/guardian at 9.00 pm if the student has missed any lecture. Thus, a record is available to ICT authorities on real time basis.

As per R-1(2), the minimum attendance necessary for granting a term (Semester) in each subject shall be minimum of 75% of the lectures and practicals, taken separately, out of the total number of lectures and practicals conducted in a semester. The students shall be deemed to have submitted the undertaking about the attendance after the admission has been secured at the ICT.

Note: Students are supposed to inform concern HOD, Dean (AP) and CoE, about their leave and the reason for absentee by letter or email. In case of illness student is suppose to inform authorities with in the first three days of illness (via email) and submit final medical certificate after joining the institute.

3.8.4 IDENTITY CARD

At the beginning of each academic year, a regular bonafide student is issued a smart Identity

Card with his/her latest photograph printed it, on payment of the necessary charges. The students must wear the I-card while on campus. I-card is also necessary for appearing at all tests and examinations. If a student leaves the course halfway, after taking admission, he/she must surrender the I-Card in the Academic office.

3.8.5 WORKING HOURS

- (a) Academic Timings: The academic working hours of the institute are between 8.30 a.m. to 5.30 p.m., with lunch break from 12.35 to 1.30 p.m.
- (b) Office Hours:
10.30 a.m. to 6.00 p.m., with lunch break from 1.15 to 1.45 p.m. - on all working days. Cash Counter:
11.00 a.m. to 1.15 p.m. and 1.45 p.m. to 4.00 p.m.

The office will remain closed on second and fourth Saturdays of a month, in addition to Sundays and public holidays.

3.8.6 GENERAL

The medium of instruction for all courses is English.

Physical fitness: The Vice Chancellor at his discretion may refer any candidate to the appropriate medical authority for ascertaining the physical fitness of the candidate to undergo the requirements of the course. The report of medical authority and the action taken by the Vice Chancellor shall be submitted to the Regional Head of Technical Education for information. It is to be noted that physically handicapped candidates are not provided with any additional facilities as far as the academic activities pertaining to the course is concerned.

The Vice Chancellor may verify the antecedents of any candidate through the appropriate police authority. The report received from police authority and the action taken by the Vice Chancellor shall be submitted to the Regional Head of Technical Education for information.

Not with standing anything contained in these Rules, if the Govt./ Institute takes any policy decision pertaining to F.Y. admissions, the same shall be brought in to effect at that point of time.

3.8.7 CONDUCT AND DISCIPLINE FOR ALL STUDENTS:

Students while studying at ICT, if found indulging in any anti-national activity contrary to the provisions of Acts and Laws enforced by Government or in any activity contrary to Rules of discipline, will be liable to be expelled from the Institute without any notice by the Vice Chancellor of the Institute.

Action against ragging: Maharashtra Prohibition of Ragging Act 1999 which is in effect from 15th May 1999 has the following provisions for Action against Ragging.

- a) Ragging within or outside of any educational institution is prohibited,
- b) Whosoever directly or indirectly commits, participates in, or propagates ragging within or outside any educational institution shall, on conviction, be punished with imprisonment for a term up to 2 years and/ or penalty, which may extend to ten thousand rupees.
- c) Any student convicted of an offence of ragging shall be dismissed from the educational institution and such student shall not be admitted in any other educational institution for a period of five years from the date of order of such dismissal.
- d) Whenever any student or, as the case may be, the parent or guardian or a teacher of an educational institution complains, in writing, of ragging to the head of the educational institution, the head of the educational institution shall, without prejudice to the foregoing provisions, within seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prima facie, it is found true, suspend the student who is accused of the offence, and shall, immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institution, it is found that there is no substance, prima facie, in the complaint received; he/ she shall intimate the fact, in writing, to the complainant. The decision of the head of the educational institution shall be final.

- e) If the head of the educational institution fails or neglects to act in the manner specified in section “d” above when a complaint of ragging is made, such person shall be deemed to have abetted the offence and shall, on conviction, be punished as provided for in section “b” above.

If any of the statement made in application form or any information supplied by the candidate in connection with his or her admission is later on at any time, found to be false or incorrect, his or her admission will be cancelled, fees forfeited and he or she may be expelled from the Institute by the Vice Chancellor.

Note: The orders issued by the Hon’ble Supreme Court/High Court/Government regarding Prohibition of Ragging Act, will be made applicable as and when issued. The same shall be binding on all concerned. **See detailed booklet appended in this Handbook.**

3.9 VARIOUS GOVERNMENT CONCESSIONS IN FEES AND THEIR REQUIREMENTS

Following are the category-wise/ concession-wise requirements to be fulfilled by the students at the time of admission to the ICT.

The various types of application forms will have to be procured by the students at the time of admission and the duly completed forms along with necessary documents **MUST BE SUBMITTED TO THE GENERAL OFFICE WITHIN FIFTEEN DAYS**, failing which, the ICT will not be held responsible for not getting the sanction of relevant concessions from the Govt.

A. Govt. of Maharashtra Freeship/ Govt. of India Scholarship

Reserved Category students from SC/ST/VJ/DT (A)/NT-B/NT-C/ NT-D/OBC/SBC can apply for Govt. of Maharashtra Freeship/ Govt. of India Scholarship.

RULES:

Govt. of India Scholarship - Annual Income limit for VJ/DT(A)/ NT-B/ NT-C/ NT-D/ OBC/ SBC student should be below Rs.1,00,000/- p.a. and for SC students below Rs. 2,00,000/- and for ST students below Rs.2,50,000/- p.a. to submit claim for Govt. of India Scholarship.

Govt. of Maharashtra Freeship - Annual Income limit for VJ/DT(A)/ NT-B/ NT-C/ NT-D/ OBC/ SBC students should be above Rs.1,00,000/- p.a. and for SC students above Rs. 2,00,000/- and for ST students above Rs.2,50,000/- p.a. to submit claim for Govt. of Maharashtra Freeship.

All the rules issued by the Govt. will be applicable to Post Graduate Students with Fellowship have less/ no freeships.

The Application Form should be filled up Online by the HSC/HSSC Board students. Such students should take out print of the filled form along with attested photocopies of the following documents and submit to the Academic Office (Mrs. Asha Bhangre). Students from other than HSC/HSSC Board should fill up paper version of the application form.

1. Income Certificate of the parents for year 2022-23.
For Freeship - Income Certificate of the parents for year 2022-23 from Tehasildar OR latest Form 16 A of the parents obtained from the employer.
AND
Non Creamy Layer Certificate for the current year (Only for VJ/DT(A)/NT-B/NT-C/ NT-D/OBC/ SBC, Not for SC/ ST) - valid up to 31st March 2022.
For Scholarship - Income Certificate of the parents for year 2022-23 from Tehasildar.
2. For Fresh ST students other than Mumbai Board - Change of District Certificate (Zilla Badal Dakhala)
3. Caste Certificate - signed by Special Executive Magistrate.
4. Caste Validity Certificate
5. Ration Card
6. Mark sheet of the last annual examination passed.

7. Admission Fee receipt of 2023-24.
8. In case of GAP period in education GAP CERTIFICATE must be submitted.
9. Hosteller claiming Govt. of India Scholarship should submit Hostel Certificate for the academic year 2023-24.

B. Hostel Allowance

Reserved Category candidates of SC/ ST/ VJ-NT/ SBC categories, staying in Hostel and applying for Govt. of India Scholarship can apply for Hostel allowance online on E-Scholarship Website of Samaj Kalyan.

After admission to hostel, students should contact Academic Office.

The attested copies of the following documents should be attached with the Application Form.

1. Income Certificate of the parents for year 2022-23 from Tehasildar.
2. Caste Certificate - signed by Special Executive Magistrate.
3. Caste Validity Certificate.
4. Mark sheet of the last annual examination passed.
5. Admission Fee receipt of 2023-24.
6. Hostel Certificate and Hostel fee receipt for the academic year 2023-24.

C. Govt. of Maharashtra Freeship to Sons and Daughters of Primary and Secondary School Teacher

The Application Form, should be obtained from the Academic Office at the time of candidate's admission and attested photocopies of the following documents must be attached while submitting the claim form.

1. Service Certificate of parent should be countersigned by Education Inspector with Date of Retirement mentioned therein.
2. Ration Card.
3. Mark sheet of the last annual examination passed.
4. Admission Fee receipt for the academic year 2023-24.

D. Freeship to Economically Backward Class (EBC) Students

Income Limit for the EBC Students to claim this freeship is Rs. 1,00,000/- p.a.

The Application Form, should be obtained from the Academic Office at the time of candidate's admission and attested photocopies of the following documents must be attached while submitting the claim form.

1. Income Certificate of the parents for year 2021-22 from Tehasildar.
2. Ration Card.
3. Mark sheet of the last annual examination passed.
4. Admission Fee receipt for the academic year 2023-24.

E. Freeship to Sons and Daughters of Ex-Servicemen

The Application Form, should be obtained from the Academic Office at the time of candidate's admission and attested photocopies of the following documents must be attached while submitting the claim form.

1. Ex-Serviceman Certificate.
2. Ration Card.
3. Mark sheet of the last annual examination passed.
4. Admission Fee receipt for the academic year 2023-24.

F. Merit cum Means Based Scholarship of Government of India (Muslim, Sikh, Buddhist, Christian, Zoroastrians (Parsi))

For application form, eligibility criteria and documents to be submitted please see www.dte.org.in. After completing the form along with required documents, it should be submitted to the ICT Academic office (Mrs. Asha Bhangre).

G. Government of Maharashtra Scholarship for the Minority Communities Students Pursuing Technical and Professional Education

(Muslim, Sikh, Buddhist, Christian, Zoroastrians (Parsi) and Jain minority communities)

For application form, eligibility criteria and documents to be submitted, please see www.dte.org.in. After completing the form along with required documents, it should be submitted to the ICT Academic office (Mrs. Asha Bhangre).



INFRASTRUCTURE LIBRARY, HOSTELS, COUNSELLING



4.1 PROFESSOR M. M. SHARMA LIBRARY

INTRODUCTION:

Established in the year 1934, Prof. M M Sharma Library functions as the central library of the institute and can be called one of the best special libraries in the country. It performs a dual role of an Academic Library as well as a Research Library, catering to the information needs of the in-house students and faculty, in particular, and, the academic and research community, in general. It is housed in a separate Ground Plus two-storied building and follows a completely open-access concept. It has a specialized collection in Chemical Engineering, Chemical Sciences, Chemical Technology and Pharmacy and its allied fields. The library can boast of rich heritage collection of old classic books and bound volumes dating back to 1930s. But along with the traditional collection it has a significant digital collection as well. Currently has access to more than 500 electronic journals. Has access to databases such as Reaxys, Sci-Finder, Scopus, Web of science, etc. The library is fully computerized using the library management software called Koha. It can be termed as a hybrid library with best collection of printed and digital documents. The library is also a member of E-Shodh Sindhu Consortium.

LIBRARY TIMINGS:

On Working days : 8:30 a.m. – 8:30 p.m.

On 2nd and 4th Saturdays, Sundays and holidays : 11.00 a.m.– 6.00 p.m.

Throughout the year the library remains closed only on four days, viz. Independence day, Republic day, Ganesh Chaturthi, and Dassera.

LIBRARY LAYOUT:

The Library is a ground plus two storied building. The layout is as follows:

First Floor	Book Collection and Circulation counter
Second Floor	Current Journals (latest issues), Reference Book Section, Theses Section, Book Bank Section
Ground Floor	Bound volumes (Back Issues) of Journals, Photocopying Section

MEMBERSHIP:

The bonafide students and faculty of the institute have book lending facility. Book borrowing facility can be availed against ID card.

LIBRARY PORTAL:

Library portal is hosted on the internet at <http://ictlibrary.firstray.in/>

LIBRARY COLLECTION:

Printed Resources

- **Books:**

The library has a very rich collection of books. The spectrum of the book collection ranges from as old as dating back to 1930s to the latest. The collection has few rare and classic books which is regularly updated with the latest updated books in the area of Chemistry, Applied Chemistry, Chemical Technology, Chemical Engineering, Pharmacy, Energy and Environmental Engineering, Biotechnology, Food Technology and Fermentation, Polymer Science and Technology, Textile Science and Technology, Oils and Surfactants, Speciality Chemical Technology.

Book Bank collection is a special collection of Text Books which are issued to students for a longer period.

Access: Books can be searched through the computerized catalogue at

<http://ictlibrary.firstray.in/>

Also two terminals are available on every floor to search through the computerized catalogue.

- **Printed Journals:**

The library subscribes to a number of scholarly journals in different specialized areas from various renowned publishers like Elsevier, Wiley, Sage, Thieme, RSC, ACS, Springer, etc.

Access: Journals can be searched through the computerized catalogue at <http://ictlibrary.firstray.in/>. Also two terminals are available on every floor to search through the computerized catalogue.

- **Theses:**

A collection of all the Theses submitted by PhD and Master's students are stored in the library and are available for reference to students.

Access: Theses can be searched through the computerized catalogue at <http://ictlibrary.firstray.in/>. Also two terminals are available on every floor to search through the computerized catalogue.

- **Reports:**

This collection comprises of Bios, Cios and Fiat reports and various other research reports.

Access: Reports can be searched through a computerized catalogue. Two terminals on every floor are available to search through the computerized catalogue.

- **Bound Volumes:**

The older issues of journals are bound into volumes and are available for reference.

Access: Printed catalogue of all the bound volumes is available at the ground floor in the Bound Volume section.

DIGITAL RESOURCES

- **Databases**

The Library subscribes to a number of indexing and abstracting and informative databases

Scopus: Scopus is the largest abstract and citation database of peer-reviewed literature: scientific journals, books and conference proceedings. Delivering a comprehensive overview of the world's research output in the fields of science, technology, medicine, social sciences, and arts and humanities, Scopus features smart tools to track, analyze and visualize research.

Access: IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://www.scopus.com/>

Reaxys: Reaxys is a web-based tool for the retrieval of chemistry information and data from published literature, including journals and patents. The information includes chemical compounds, chemical reactions, chemical properties, related bibliographic data, substance data with synthesis planning information, as well as experimental procedures from selected journals and patents. It is licensed by Elsevier.

Access: IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://www.reaxys.com/>

Sci-Finder: SciFinder is a research discovery application that provides unlimited access to the world's most comprehensive and authoritative source of references, substances and reactions in chemistry and related sciences. SciFinder offers a one-stop shop experience with flexible search and discover options based on user input and workflow.

Access: IP based access is available throughout ICT campus. Registration is mandatory for access. For registration you require email id of the institute. Link is accessible through the library portal. <http://www.cas.org/products/scifinder>

Web of Science: Web of Science is an online subscription-based scientific citation indexing service now maintained by Clarivate Analytics that provides a comprehensive citation search. It gives access to multiple databases that reference cross-disciplinary research, which allows for in-depth exploration of specialized sub-fields within an academic or scientific discipline.

Access: IP based access is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal. <https://login.webofknowledge.com>

- **eJournals**

The library subscribes to a number of electronic journals from renowned publishers like Elsevier (Science Direct), Wiley, Thieme, Springer, Taylor and Francis, RSC, ACS, Begell, Bentham Science, Springer Nature, etc. Also has access to a huge number of ejournals through Infilbnet eShodhsindhu consortium.

Access: IP based access to all the ejournals is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eReference Sources**

- **eReference Module in Chemistry, Molecular Sciences and Chemical Engineering**

Elsevier Reference Modules include thousands of cross-references and links to the related book chapters and journal articles available to you on ScienceDirect, providing the full spectrum of the subject on one easy platform.

Access: IP based access to the eReference Module is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **Begell Heat Exchanger Design Handbook (HEDH) – Multimedia edition**

Reference source for heat exchanger design and associated technologies. The print edition has been converted to a fully searchable interactive web-based multimedia product. The content is presented in an exciting interactive HTML format with in-text unit conversion and references, widgets for key heat transfer calculations, wizards to guide heat exchanger selection and 3D interactive visualization of equipment.

Access: IP based access to multimedia handbook is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eBooks**

Access to a collection of electronic Books published by RSC, ACS, Elsevier, Begell, T&F and Pearson eTextbooks is available.

Access: IP based access to all ebooks is available throughout ICT campus. Registration is not mandatory for access. Link is accessible through the library portal.

- **eVideo Journal**

Access to eVideo Journal published by Jove is available.

Access: Link is accessible through the library portal. <https://www.jove.com/journal>

- **eTheses**

The eTheses of ICT as well as other universities are available on infilbnet consortia eShodhganga.

Access: Link is accessible through the library portal. <http://shodhganga.infilbnet.ac.in/>

- **ePatent Database**

Library subscribes to electronic patent database called Derwent Innovation (DI).

Access: Contact the library to access this database.

- **Plagiarism check facility**

Similarity check or plagiarism check through software is available for PG students.

- **eWriting Assistant**

Access to Grammarly is available which assists you in writing and checking grammar and with better vocabulary.

Access: For access registration is mandatory. For registration write an email to library@ictmumbai.edu.in. The details for registration and how to use would be sent through email. You require institutional email id for registration.

Services:

Every student has to sign an undertaking (copy of which is available in chapter 9) at the time of taking library membership.

Circulation Service	Reference and Referral service
Current awareness Service	Bibliographic Service
Photocopying service	User Orientation programs
E-resources Training Programs	Book Bank Service

Facilities:

Reading Hall • e-Library • Wi-Fi

Remote access facility to access the e-resources off campus is also available. Please write to library@ictmumbai.edu.in for login credentials. Institutional email id is mandatory for remote access.

Events/Training Programs:

Training programs for the usage of e-resources are organized by the library regularly. Such programs and events are announced through emails & library blog <https://mmslib.wixsite.com/ictlibraryblogpost>. Please subscribe to blog for event notifications.

Contact: Tel: +91-22-33611127-29, email: library@ictmumbai.edu.in

4.2 HOSTELS

4.2.1 PREAMBLE

ICT has four hostel blocks on the campus including 2 boys' and 2 girls' hostels. The total number of hostel accommodation seats available for the students at the ICT is nearly 900 (for all courses and years) including 300 lady students.

Hostel No. 1, is the first hostel built in 1951, as University and Birla Hostel, with provision of accommodation for all students of the University of Mumbai. In 1966, Hostel No. 2 was built for accommodating UG and research students with capacity of accommodating 120 students. In 1987, Hostel No.3 was built and in 1990, Hostel No. 4 was built to accommodate the students of ICT (then UDCT). Hostel No. 5, a 7-storey building with the capacity to accommodate 352 students was built during early 2000s and occupied in 2005. The hostel has a good gymnasium and play grounds with sports facilities for in-door and out-door sports activities. Guest room are located in hostel no. 5 which can be used by parents (charges applicable) whenever they visit ICT to meet their wards.

Wardens manage all the affairs of the hostel and are assisted by hostel office staff and student committees headed by general secretaries of hostels. Hostels have 3 Mess which are run internally by the Mess committees headed by Warden. For cleanliness and maintenance of hostels, support staff is appointed. There is a Medical facility available in the hostel.

Hostel demands healthy environment of commitment and discipline among the students. Students are encouraged to develop community life, taking care of their physiological and emotional problems and shape themselves to be better citizens and leaders of tomorrow.

4.2.2 PROCESS OF ALLOCATION OF HOSTELS

ADMISSION TO THE INSTITUTE DOES NOT GUARANTEE ADMISSION TO THE HOSTEL. Students need to apply to the hostel separately. Admission would be strictly on merit basis subject to availability of seats. **To secure hostel admission, students must compulsorily have health insurance.**

1. Only bonafide students of ICT are entitled for hostel admission.
2. Hostel No. 1 and 5 are allotted to boys. Hostel No. 2 and 3 are only for girls. All the hostels are unaided and maintained by the Institute. Hostel No. 1 is allotted to 1st year undergraduate and Master's degree students Hostel No. 3 is allotted to 1st year undergraduate, Master's

and Doctoral girl students.

- Total number of seats available for fresh admissions is about 240 per year, as per the table below :

Course	Number of admissions in the hostel
First year UG admissions (B.Chem.Engg., B.Pharm. and B.Tech.)	40 girls and 90 boys maximum
First year Master's Degree (M.Chem. Engg., M.E., M.Tech., M.Sc., M.Pharm.)	40 girls and 90 boys depending on availability
Hostel admission to new doctoral students	Subject to availability created due to vacating the hostel by earlier Ph.D. students with respect to the departmental allocation.

- Accommodation in hostels cannot be guaranteed to all the students who are admitted to ICT for various courses. Preference will be given to undergraduate students.
- Admission will be offered strictly on merit basis. Preference will always be given to out-station students who come from places beyond the limits of Mumbai and suburbs (i.e. beyond Virar, Titwala, Ambernath, Panvel as well as other places which are beyond 70 km from the institute). As a proof of stay beyond the limits of Mumbai and suburbs, they are required to upload scan copies of ration card/ Adhar card and school-leaving certificate. Any false representation in this regard will be strictly dealt with.
- Student who have taken admission to ICT can register on-line through ICT log in portal (ictmumbai.co.in) to apply for hostel accommodation. Students need to upload a residence proof, a medical certificate from your family doctor (with clearly mention about chronic health problem or allergy if any). Hostel authority will approve the form and will give call for admission depending upon the availability of seats.
- Students must confirm the hostel admission by paying the required fee on-line. The hostel fee will be paid by on-line mode only.
- Admission to hostel is linked to department and course quota. If students cancel the ICT admission and take the admission to another course in ICT need to register again for hostel admission in such case the hostel admission will not be guaranteed.
- The admission to the hostel will be done by the respective Warden and Hostel Office in concern with Head Warden. All the rights for hostel admissions are reserved with respective Warden, ICT.
- The Warden of the respective hostel has all the rights to change/transfer a student from one room to other within the hostel for convenience of the administration. Also, every year the student may be shifted from the accommodation provided in earlier year.
- In case of the year-drop, the candidate will have no claim for hostel accommodation and will have to vacate the hostel. Readmission to hostel for such student on clearing the year-drop will not be guaranteed.
- Ph.D. Students will not be eligible to stay for more than 5 years in hostel.
- Every student taking admission to the hostel has to sign an undertaking (copy of which is available in chapter 9) at the time of admission.

4.2.3 HOSTEL FEES

Type of Room	Hostel Fees (INR)	Sinking Fund	Other Fees		Total (INR)
			Sports & Cultural Fees	Mess Depreciation	
Double seater	30500	3000	3000	2500	39000
Triple seater	27500	3000	3000	2500	36000
Four & Five Seater & more	25500	3000	3000	2500	34000

* Hostel fees for the year 2023-24 may increase. Revised fee structure would be made available on the website at the time of admission.

*Accommodation fees should be paid online following the procedure detailed on ictmumbai.co.in

4.2.4 HOSTEL MESSSES

It is mandatory for all hostel students to join the Hostel Mess allotted to them. Hostels are having two messes for boys and one mess for girls. Each mess is run by the students on co-operative “no-loss - no-profit” basis under the Control of the concerned Warden. Hostel students have been managing their messes since 1951, with an excellent tradition and help student committee members to develop managerial skills. Typical mess charge includes breakfast and two meals a day. Mess Deposit Advances / Monthly Expenses will be extra as per the norms of the respective messes. Mess deposit of INR.5,000/- is required to be paid at the time of joining of Mess, which will be refunded at the end of the stay. All the mess members are required to pay INR 25,000/- towards advance mess charges from which the monthly mess bill will be deducted every month.

4.2.5 HOSTEL MANAGEMENT

WARDENS AT ICT HOSTELS

Hostel No.	Warden	Telephone
1	Dr. C. S. Mathpati Warden, Hostel No. 1 (Department of Chemical Engineering) Tel.: 91-22-3361 2017 <i>E-mail: gu.chaturbhuj@ictmumbai.edu.in</i>	3361 2212
2	Mrs. Madhavi Wadkar Warden, Hostel No. 2 (Department of Librarian) email: <i>mm.wadkar@ictmumbai.edu.in</i>	3361 1126
3	Dr. J. T. Waghmare Warden, Hostel No. 3 (Department of Oils, Oleochemicals and Surfactants Technology) email: <i>jt.waghmare@ictmumbai.edu.in</i>	3361 2510
5	Prof. D. D. Sarode Head Warden and Warden, Hostel No. 5 (Department of General Engineering) email: <i>dd.sarode@ictmumbai.edu.in</i>	3361 2014

Hostel Office	For details please contact Mrs. Surekha Kamble- Senior Clerk Mr. Sanjay Bansode- Accountant Ms. Aarti Karanjkar- Clerk	3361 1452 3361 1453
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4.2.6 GENERAL

1. Guest Room facility is available at Hostel No. 5 only for parents who wish to meet their Wards studying at ICT on payment basis. The guest room shall be available for a maximum 10 days per year at concessional rate to the parents and immediate relations (siblings) of students and staff (faculty and support staff) at the below mentioned rates

Concessional rates

INR 800/-per day per room for AC Room

INR 350/-per day per room for Non AC Room

Regular Rates

INR 2,200/- per day per room for AC Room

INR 800/- per day per room for Non AC Room

2. Hostels are equipped with Mess, T.V. Room, Reading Room, Playground, Health Centre, Gymkhana, Library and Study Room Facilities.
3. ICT Hostels are equipped with a “Health Centre”. Two eminent physicians, Dr. Agarwal and Dr. (Mrs.) Mukne, provide medical advice to all campus residents.
4. All students are covered under Accident Policy of the Institute.
5. Each hostel block is supervised by a Warden, who is a faculty member of the Institute.
6. It is mandatory that all the new entrants to the hostels get their hostel admission forms signed by the Student’s Counselor.

4.2.7 DISCIPLINE AND DECORUM

1. Smoking and consumption of alcohol is strictly prohibited in hostels and public places in the entire campus of ICT. A strict disciplinary action will be taken against the student involved in misdemeanour and illegal activities.
2. All the students have to report in their respective hostels by 10.00 pm.
3. All senior students must create a conducive and healthy atmosphere in the rich tradition of the ICT and the hostels. Several hostel residents have attained very high positions in their profession, as industrialists, educators and policy makers and brought laurels to the institute; including Padma awards of President of India. Two former Directors of the ICT, Professor M.M. Sharma and Prof J.B. Joshi, and the Former Vice Chancellor, Professor G.D. Yadav have been hostel residents on this campus. Prof. G. U. Chaturbhuj, Dr. Jyotsna Waghmare, who are hostel wardens currently were themselves ICT Hostel residents during their student days. Several other faculty members have also been hostel residents. Faculty and staff quarters are also situated near the hostels bringing a sense of community feeling. Faculty members participate in the programmes arranged by the hostelites and often make themselves available for counselling, whether they are wardens or not. Hostel Day is a special annual day in the lives of hostelites to show their skills and talents in sports, cultural programmes and the like.
4. Another grand tradition of the hostels is that the past students, from all over the world, try to assist the hostel activities by providing monetary help, either through personal donations or company sponsorships.
5. Action against ragging: Maharashtra Prohibition of Ragging Act 1999 is in effect from 15th May 1999. (See details later from UGC in this regard). Any case of ragging should be reported by the victim in writing within three days of the incident to the respective warden

with copies marked to: respective Hostel Wardens, Head Warden, Dean- Student Affairs Prof. A. R. Athalye (ar.athalye@ictmumbai.edu.in) and Human Resource Development, Prof. R. V. Adivarekar (rv.adivarekar@ictmumbai.edu.in), and Registrar, Professor R. R. Deshmukh (registrar@ictmumbai.edu.in).

6. Detailed rules and regulations will be provided during admission.

4.3 COUNSELLING SERVICES

Counseling services are available for the benefit of all the students of the Institute - right from First year to those doing their Doctorate. The Counselor - **Ms. Malini Shah**, with her in-depth knowledge of Philosophy and Psychology, has been actively participating in this important activity. The Counselor deals with all types of personal and academically related problems and students are free to meet her from Tuesday to Friday any time between 11.30 a.m. and 4.30 p.m.

It is mandatory for all the first year students (UG and PG) including hostelites to meet the Counselor [in her office on 1st floor, Godrej Students Centre) (Intercom No. 1351), in groups of ten for an interactive session. Interactive Sessions are held from time to time to make the students aware of their plus points and weak points. Later on, a one - to - one session is held in order to help them develop confidence and overcome difficulties which may be too personal. All the students are free to meet **Ms. Malini Shah** any time they feel by prior appointment.

4.4 DAYCARE SERVICES

Day Care Service for children:

Professional Day Care service for children is available in the campus. Faculty members, Support staff, Post Doc fellows, Ph.D. research scholars having children can avail this facility.

Fees details are as follows:

Child up to 3 years INR 4000 per month

Child above 3 years INR 3000 per month

(Does not include Food)

Application form would be available with the administration department.

Institute Canteen



Student Activities 2022-2023



Independance Day



International Yoga Day



Constitution Day



National Unity Day



Blood Donation Campaign



Dasshera Celebration



Eye and health check up camp



Ganesh Festival



Cyber Awareness Program



Shivjayanti



Republic Day



FunTech 2023





Manzar



Manthan



Meraki Fine Arts & Photography



E-cell



Sports Club



Agastya 2022



ASSOCIATIONS, ENDOWMENTS AND PLACEMENT

TWELFTH MAIN CONVOCATION OF ICT

The 12th Convocation of the Institute was organized on March 4, 2023 at ICT where Dr. G Satheesh Reddy Scientific Adviser to Raksha Mantri Ministry of Defence Government of India delivered the Convocation address.

The next batch of the students under the deemed to be university status was bestowed with their respective degrees on this occasion. It included:

Masters Degree - M.Chem.Engg., M.Tech., M.Pharm. M.E. and M.Sc.: 117 candidates, M.Chem.Engg.: 8, M.Tech. in Green Tech.: 7, M.Pharm.: 3, M.Tech in Pharma. Tech.- 5, M.Tech. Pharm. Biotech: 2, M.Tech in Fibres and Textile Processing Tech. - 7, M.Sc. in Textile Chemistry- 3, M.Tech. in Dyestuff Technology- 5, M.Tech in Perfumery and Flavour Tech- 11, M.Tech in Food Engg. And Tech.-- 5, M.Tech in Food Bio Tech.- 3, M.Tech in Oils, Oleochemicals and Surfactant Tech.-

12, M.Tech in Polymer Engg. And Tech. - 10, M.Tech in Surface Coating Tech. - 12, M.Tech in Bioprocess Tech: 14, M.E. (Plastic Engg.)- 10

Doctorate Degree: 33 candidates

Ph.D.(Tech.) in Bioprocess Technology:1, Ph.D. (Tech.) in Chem.Engg.: 2, Ph.D. (Tech.) in Green Technology: 3, Ph.D. (Tech.) in Food Biotechnology:1, Ph.D. (Tech.) in Food Engg. and Technology: 2, Ph.D. (Tech.) in Pharmacy Pharmaceuticals/ Pharmaceutical Chemistry/ Pharmacology/Pharmacognosy: 4, Ph.D. (Tech.) in Pharmaceutical Technology: 1, Ph.D. (Tech.) in Polymer Engineering and Technology: 2, Ph.D.(Tech.) in Mechanical Engineering:1, Ph.D.(Tech.) in Fibres and Textile Processing Technology: 1, Ph.D. (Sci.) in Textile Chemistry: 2, Ph.D.(Sci.) in Biotechnology: 3, Ph.D.(Sci.) in Chemistry: (Inorganic/Organic/Physical): 10

Dr. R.A. Mashelkar, Chancellor, Institute of Chemical Technology presided over the function.



5.1 TECHNOLOGICAL ASSOCIATION

Technological Association (TA) is the student body of ICT that conducts co-curricular and extra-curricular activities throughout the academic year. The 32-member strong team is presided by the Vice-Chancellor, Prof. A. B. Pandit, while Dean- Student and Alumni Affairs who is ex-officio Vice President. Cultural activities, including those related to music, dance, art, literature are organized by the different clubs under TA. On-campus, award winning festivals are also held such as the annual technical festival of the institute, **Vortex**, that allows students from all over the country to present their innovative ideas and research work and also solve industry defined problems. The annual inter-college cultural festival, **MANZAR** has a plethora of programs, specifically concerts and workshops that serve to enrich the cultural aspect of the institute. The intra-college festival, **FunTech**, is one of the oldest event on campus and involves several sporting and cultural events for all the students ICT. **SportSaga** is the annual inter-college sports festival of the institute that includes both, mainstream sporting as well as informal events and also conducts the trademark ICT Marathon each year.

Marathi Literary Association of Institute of Chemical Technology popularly known as **MANTHAN** is one the oldest club of TA started in 1980. It conducts various kinds of programs every year based on Marathi literature to inculcate and develop liking towards the native state language, Marathi. **MANTHAN** upholds rich tradition of presenting quality programs. **Sports Club** conducts numerous sports activities with sole aim to promote sports, fitness and team spirit. The events include inter-college tournaments of numerous sports, adventures like mid-night cycling, monsoon trek and faculty games etc. The **TEDx club** organizes activities such as TEDxMAS, MotivaTED and several inspiring talks by renowned personalities.

The in-house technical journal, **Bombay Technologist** is also run under the purview of the TA and encourages the art of scientific writing among students. **Entrepreneurship Cell** (E-Cell) was also launched recently that serves to enhance the entrepreneurial culture at ICT. The TA also addresses student grievances and serves as a link between the faculty members and the students.

5.2 UDCT ALUMNI ASSOCIATION

UDCT Alumni Association (UAA) (udctalumni.org.in/) was formed in 1989 to foster fellowship and provide a forum to bring together the alumni of ICT, its past and present faculty members on a common platform. A major activity of the UAA is to promote infrastructure growth at ICT including development of laboratories and also to support student growth both academic and co-curricular. UAA also promotes the activities of the ICT in India and abroad as well as institutes awards and fellowships to alumni/well wishers. For the last over 30 years, UAA has striven hard to achieve its objectives with valuable and timely support of the members, well wishers. UAA currently has more than 6700 life members and 14 Patron members. UAA plays a major role in following specific domains:

1. **Providing direct financial assistance to ICT :**
 - To support infrastructure development of the institute
 - To support student activities organized by Technological Association
 - To support needy students in the form of loans, which students can pay back in installments after graduation
 - To provide books in special areas such as management and also assisting the library facilities
2. **Enhancing studentship at ICT :**
 - Sponsoring factory visits
 - Arranging lectures, seminars, symposia, workshops
 - Awarding best students of ICT for their meritorious performance

- Supporting the Training and Placement Service to the ICT current students.
 - Encouraging, promoting, supporting providing, spreading and arranging for education and research in Chemical Technology, Chemical Engineering, Pharmaceutical Sciences and related Basic Sciences, Management studies and related topics.
 - A Certificate Course in Practice of Chemical Technology is fully run and supported by UAA specially for the third year undergraduate students with an objective of career guidance and enhancing the knowledge on the practical aspects
 - The Postgraduate Diploma Course in Chemical Technology Management (CTM) for the Ph.D. students in ICT is also supported by UAA.
- 3. Organizing Institution level events :**
- Technology Day and UAA foundation day event where UAA Distinguished Alumnus awards are given to alumni for their contributions to entrepreneurship and professional development In addition, UAA Young achiever award is also given to alumni below the age of 35 years for their exceptional professional achievements
 - UAA Annual Day celebrations where UAA Distinguished Alumnus awards are given in the category of Academics, Research and extra mural
 - UAA also assists in organization of ICT Foundation and Annual day
- 4. Managing the Alumni Network : Managing the database of all alumni**
- Managing the database of all alumni
 - Increasing UAA Membership Maintaining UAA Website
 - Issuing UAA bulletins.
- 5. UAA Chapters**
- UAA has local chapters in the country at Ahmedabad, Ankleshwar, Delhi NCR region, Hyderabad, Kolhapur, Marathwada, Pune, Tarapur and Vapi as well as abroad in China, UK, USA (Atlanta, Houston and Bay area), Singapore, and Thailand

5.3 CULTURE OF ENDOWMENTS

The ICT has sanctioned positions of 108 faculty (29 Professors, 38 Associate Professors and 41 Assistant Professors) and a support staff of 240. The ICT has a tradition of establishment of endowments with an objective of supporting faculty positions, foreign travel assistance, merit-cum-means scholarships, staff welfare, library, campus development, research fellowships and seed money for research by young faculty. There are 90 endowments in the Institute. All these endowments have been established through generous donations by alumni, industries, philanthropists and well-wishers. Only part of the interest (up to 50-70%) is used towards the purpose of the endowment and the remaining is ploughed back into the corpus allowing it to grow with time.

5.3.1 FACULTY ENDOWMENTS

1. R.T. Mody Professor of Chemical Technology and Director (1933)
2. Sir Dorabji Tata Reader in Pharmaceutical Chemistry (1943)
3. Singhanee Reader in Chemical Engineering (1936)
4. Singhanee Lecturer in Chemical Engineering (1936)
5. Singhanee Lecturer in Pharmacy (1943)
6. Singhanee Lecturer in Paint Technology (1946)
7. Singhanee Associate Lecturer in Chemical Engineering (1936)
8. Singhanee Associate Lecturer in Food Technology (1945)
9. Sir Homi Mehta Reader in Oil Technology (1943)
10. Sir Homi Mehta Associate Lecturer in Food Technology (1943)
11. Darbari Seth Professor of Inorganic Chemical Technology (1995)
12. BPCL Professor of Chemical Engineering (2001) Changed to Bharat Petroleum Distinguished Professor of Chemical Engineering
13. V.V. Mariwala Chair in Chemical Engineering (2004)

14. J.G. Kane Chair of Oil Technology (2008)
15. M.M.Sharma Distinguished Professor of Chemical Engineering (2009)
16. Narotam Sekhsaria Distinguished Professor of Chemical Engineering (2009)
17. R.A. Mashelkar Chair of Chemical Engineering (2009)
18. K.V.Mariwala-J.B. Joshi Chair of Chemical Engineering (2009)
19. Gunavati Kapoor Chair in Pharmaceutical Technology (2009)
20. Dr. John Kapoor lecturer in Pharmaceutical Technology (2010)
21. RCF Professor of Chemical Engineering (2012)
22. Dr. B. P. Godrej Distinguished Professor of Green Chemistry and Sustainability Engineering (2015)

5.3.2 VISITING PROFESSORS/FELLOWS/LECTURERS/ORATIONS ENDOWMENTS

There are 51 endowments which have helped us immensely in attracting the best professionals to the Institute from all over the world who have interacted with UG and PG students, faculty and alumni. The honoraria range from Rs. 5000 to 1.25 lakhs for a period of one day to 15 days. Some eminent faculty from institutes such as MIT, Purdue, Cambridge, Monash, UC Berkeley, UCSB, Montreal have taught UG and PG courses in ICT under these endowments. These lectures form part of audit courses for research students. Besides this public lectures are organized under each endowment. All departments have been benefitted and the list is as follows:

1. GENERAL

1. Professor B.D. Tilak Distinguished Lectureship
2. Professor B.D. Tilak Visiting Fellowships.
3. Golden Jubilee Visiting Fellowships.
4. "Late Dr. Balwant S. Joshi Distinguished Visiting Professor/ Indian Scientist in Chemical Engineering / Chemical Technology / Applied Chemistry"
5. Shri. B. S. Rajpurohit Visiting Faculty and Oration
6. Shri D. M. Trivedi Lecture in Green Chemistry and Technology
7. Late Professor W. B. Achwal Oration
8. "Late Dr. Balwant S. Joshi Lectureship in Organic Chemistry (including chemistry of Natural Products)/ Bio-organic Chemistry/Biotechnology" - A Technologist responsible for the development of Indian Chemical Industry.

2. DEPARTMENT OF CHEMICAL ENGINEERING

9. Dr. G.P. Kane Visiting Professorship in Chemical Engineering.
10. The Dow Professor M.M. Sharma Distinguished Visiting Professorship in Chemical Engineering.
11. Shri V.V. Mariwala Visiting Professorship in Chemical Engineering
12. Shri G.M. (alias Dada) Abhyankar Memorial Distinguished Fellowship in Chemical Engineering
13. Professor R.A. Rajadhyaksha Memorial Lecture series.
14. ShrimatiKusumben and Shri Mathradas Kothari Visiting Professorship in Chemical Engineering
15. K. J. Somaiya Visiting Professor of Chemical Engineering
16. Professor Arun S. Mujumdar Visiting Fellowship

3. DEPARTMENT OF SPECIALITY CHEMICAL TECHNOLOGY

17. K.H. Kabbur Memorial Silver Jubilee Lectureship.
18. Professor K. Venkatraman Lectureship.
19. Pidilite Industries Ltd. Visiting fellow in Dyestuff Science & Technology.
20. Dr. KKG Menon Memorial Lecture
21. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellow in the areas of Dyestuff Technology and Textiles Processing Technology"

- 4. DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY**
 22. Professor G.M. Nabar Endowment Lectureship.
 23. L.N. Chemicals ICT Diamond Jubilee Visiting Fellow
 24. Class of 1966 Visiting Fellowship.
 25. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellow in the areas of Dyestuff Technology and Textiles Processing Technology”
 26. Professor M. D. Teli Endowment for Oration and welfare of Students/Support Staff

- 5. DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY**
 27. Professor A. Sreenivasan Felicitations Lectureship.
 28. Marico Industries Visiting Fellowship
 29. ICT - Lupin Visiting Fellowship for Bioprocess Technology

- 6. DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY.**
 30. Professor J.G. Kane Visiting Professorship in Chemical Technology
 31. Professor J.G. Kane Memorial Lectureship

- 7. DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY**
 32. CIPLA Distinguished Visiting Fellowship in Pharmaceutical Sciences
 33. Themis Medicare - ICT Diamond Jubilee Distinguished Fellowship in Pharmaceutical Sciences
 34. Professor (Mrs.) Malati R. Baichwal Visiting Fellowship in Pharmaceutical Science and Technology
 35. AAIPS- Dr. R. S. Baichwal Pharmaceutical Seminar
 36. Dr. S.K. Pradhan Endowment
 37. Professor V.M. Kulkarni Endowment Fund in Pharmaceutical Science and Technology

- 8. DEPARTMENT OF POLYMER ENGINEERING AND TECHNOLOGY AND DEPARTMENT OF SURFACE COATING TECHNOLOGY**
 38. Shri K. S. S. Raghavan - Chemical Weekly Visiting Professorship in Polymer Science and Technology
 39. Indian Plastics Institute (IPI)-ICT Diamond Jubilee Visiting Fellowship in Polymer Processing
 40. ChemimpexRastogi-ICT Diamond Jubilee Visiting Fellowship in Surface Coatings.
 41. Synpol-ICT Diamond Jubilee Distinguished Visiting Fellow in Science & Technology of Pigment
 42. Tipco-ICT Diamond Jubilee Distinguished Visiting Fellow in Thermosets
 43. Jayvee Organics & Polymers(P)Ltd. Visiting Fellowship in Polymer Additives and Compounding
 44. Shri. Parmanand F. Parikh Endowment
 45. Shri B.S. Rajpurohit Visiting Professorship in Polymer Science and Technology
 46. Sauradip Chemical Industries Pvt. Ltd. Visiting Fellowship

- 9. DEPARTMENT OF CHEMISTRY**
 47. Dai-Ichi Karkaria Ltd. Visiting Fellowship
 48. The DharamsiMorarji Chemical Co. Visiting Fellowship in Chemistry
 49. The (Late) Shri. G.D.Gokhale Endowment Lectureship
 50. Spinco-Biotech - Ramanathan Lectureship

- 10. DEPARTMENT OF PHYSICS**
 51. Dr. Mooljibhai Shivabhai Patel Trust Visiting Fellowship in Polymer Physics

5.3.3 MERIT CUM MEANS FINANCIAL ASSISTANCESHIPS FOR UG STUDENTS FROM ICT- MUMBAI CAMPUS AND INTEGRATED M.Tech. STUDENTS FROM ICT- IOC ODISHA CAMPUS AT BHUBNESWAR AS WELL AS MARATHWADA JALNA CAMPUS FOR THE YEAR 2023-2024

The ICT supports 251 students under merit-cum-means financial assistanceships. The range is Rs. 3000/- to Rs. 1,00,000/ per annum per person through several endowments, private trust and annual commitments by alumni. All economically deprived students are given assistance in the form of tuition fees, hostel fees, mess bills and travel assistance to present papers in national conferences. The names of various Merit-cum-Means Assistanceships are given below.

I. GENERAL SCHOLARSHIPS

1. M. S. Patel Trust Merit-cum-Means Scholarship (Four) (Value of Rs. 5,000/- each.)
2. Smt. BadamideviChiranjilalMurarka Charity Trust Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
3. Sohrab Mistry Merit-cum-Means Scholarship (One) (Value of Rs. 5,000/- each.)
4. Perin&Jal Khan Merit-cum-Means Scholarship (Three) (Value of Rs. 3,600/- each.)
5. Smt. ParvathySitaram Merit-cum-Means Scholarship (One) (Rs. 5,000/- each.)
6. Druman M. Trivedi Merit-cum-Means Scholarship (Two) (Value of Rs. 3,600/- each.)
7. S.L. Venkiteswaran Merit-cum-Means Scholarship (Two) (Value of Rs. 5,000/-each)
8. Late Dr. (Mrs.) MahalaxmiBhagwat Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
9. Prof. A.N. Kothare Scholarship (Two) (only for first year, HSC Mumbai Board preferred) (Value of Rs. 5,000/- each).
10. Rukmani and Nagraj Rao Memorial Merit-Cum-Means Scholarship (One) (Value of Rs. 4,000/-)
11. Dr. D.D. Haldavnekar Merit-Cum-Means Scholarship (Five) (Value of Rs.1800/- each.)
12. Smt. Kamala Sankhe Scholarship for girl student (Four) (Value of Rs. 10,000/- each.)
13. Smt. AnuradhaDeshmukh memorial scholarship (Two) (Value of Rs. 7000/- each.) (One Chem. Engg., One B.Tech., Girl mostly from hostel)
14. RamnathHolkar Merit cum Means Scholarship AND YashvantHolkar Merit cum Means Scholarship(Two) (Value of Rs. 10,000/- each.) (One Chem. Engg., One B.Tech.)
 1. RamnathHolkar Merit cum Means Scholarship:
 2. YashvantHolkar Merit cum Means Scholarship:
15. Dr. M. G. Palekar Merit cum Means Scholarship (One) (Value of Rs. 20,000/-)
16. UDCT- Alumni Ass-USA (Chap - 2) Scholarship (Forty Nine) (Value of Rs. 25,000/- each)

II. DEPARTMENT OF DEPARTMENT OF OILS, OLEOCHEMICALS ANDSURFACTANTS TECHNOLOGY, DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY AND DEPARTMENT OF POLYMER AND SURFACE ENGINEERING

1. Fine Organic Industries Merit-cum-Means Scholarship (Three) (Rs.4500/-each) amount to be decided each year. For the dept. of oil, food and polymer.
2. Kamani Oils Merit-Cum Means Scholarship (two) (Value of Rs. 25,000/- each) (for student from Final Year B.Tech.(Oils) and Final Year B. Tech. (Foods)

III. DEPARTMENT OF CHEMICAL ENGINEERING

1. Gogri Brothers Scholarship (Four) (value of Rs. 3,000/- each.)
2. HemrajLaljiMeishry Scholarship (Two) (Value of Rs. 3,000/- each)
3. Dr. NandkumarKochar& Raj Kumar Kochar Trust Scholarship (Two)(Value of Rs. 1,000/- each.)(one from S.Y. and one from T.Y. ChemEngg.)
4. PurbhudasJeevandas Mint Road Wadi Trust Scholarship (Four) (Rs. 3,500/- each)
5. Y. T. Shah Merit-cum-Means Scholarship (One) (Value of Rs. 2,000/-)
6. Vaishnomal Malhotra - K.K. Malhotra Merit-cum-Means Scholarships (Two) (Value of Rs. 7,500/- each)

7. Head Master Muthuswami Merit-cum-Means Scholarship (One) (Value of Rs. 1850/-)
8. Rajendra G. Sardesai Scholarship (Four) (Value of Rs. 20,000/- each)
9. B. Chem. Engg Class of 1962 (Six) (Rs. 5,000/- each)
10. AndanallurSrinivasaVenkatesan&Ranganayaki Scholarship (One) (Rs.3,000/-)
11. Daisy NavarozeBaria Scholarship (One) (Rs. 1,000/-)
12. Dr. Surendra R. Gupta Endowment fund and Merit Cum Means Scholarship
13. Sarojben and Pratapray Shah Memorial Scholarship (Six) (Value of Rs.75,000/- p.a. each)
14. Shri KantilalAjmera Merit cum Means Scholarship (one) (Value of Rs. 5,000/- p.a.) (Only for one UG student of Chem. Engg.)
15. UDCT B. Chem. Engg. Batch 1992 (One) (Rs. 75,000/-)
16. 1978 B. Chem. Engg. batch scholarship (a) 2 x 45,000/- each to Final year Chemical Engineering student passing out from Third year who is in top 10 ranks and also financially poor (by Mr. S. Kulkarni)
17. Prasad and PoojaMutalik Merit cum Means Scholarship for Chemical Engineering Students (Two) (Value of Rs. 5,000/- p.a.)
18. 1975 B. Chem. Engg. Batch Scholarship Fund (No. of Students 7) (Value of Rs. 5,000/- p.a.)
19. "Scholarship from anonymous alumni from the 1978 B. Chem. Engg. batch" (by Mr. GautamShahani) (One) (Value of Rs. 75,000 p.a.) (Only for one needy UG student of Chem. Engg.)
20. Ganpati Ram Scholarship Fund from 1994 Chem. Engg. Batch (One) (Value of Rs. 70,000/-)

IV. LOAN SCHOLARSHIPS

- B. Chem. Engg. Class of 1982 (Two) (Value of Rs. 50,000/- each.) (Only one candidate is applied for the Loan scholarship)

V. DEPARTMENT OF OILS, OLEOCHEMICALS AND SURFACTANTS TECHNOLOGY

1. Castrol Merit-cum-Means Scholarship (Two) (Value of Rs. 4,500/- each)
2. G.M. Alias Abhyankar Merit-cum-Means Scholarship (Three) (Rs.4,000/-each)
3. Shri KeshaoBapurao Kulkarni Scholarship (for one UG student of Dept. of Oils) (Rs. 7500/-)
4. Professor D. R. Rebello Endowment Scholarship (One UG student from Oils Dept. only) (Rs. 5,000 /-)

VI. DEPARTMENT OF FIBRES AND TEXTILE PROCESSING TECHNOLOGY

1. Perin&Jal Khan Merit-cum-Means Scholarship (Two) (Value of Rs. 4,000/- each).
2. Mr. Dinshah B. Katrak& Mrs. Goolcheher D. Katrak Merit-cum- Means Scholarship (One) (Value of Rs. 2,000/-)

VII. DEPARTMENT OF FOOD ENGINEERING AND TECHNOLOGY

1. "Professor P.J. Dubash Memorial – AFST (I), Mumbai Chapter Endowment Scholarships" (One) (Value of Rs. 20,000/-) for UG B.Tech. student in FET (Food Engineering and Technology Department).

VIII. DEPARTMENT OF POLYMER AND SURFACE ENGINEERING

1. Kumar R. Basu Memorial Merit-cum-Means Scholarship (Two) (Rs. 3,500/- each) (only PPV)
2. Synpol Memorial Scholarship (Five) (Rs. 3,500/- each.)
3. "Ms. Swati BalwantBhagwat Merit-cum-means Scholarship" for ONE girl student who

has passed first year B. Tech. examination in Dept. of Polymer and Surface Engineering and Technology (Rs. 5000/-)

IX. DEPARTMENT OF SPECIALITY CHEMICALS TECHNOLOGY

1. Colour Chem. Ltd. Merit-cum-Means Scholarship (One) (Value of Rs. 3,600/-)
2. Dr. Kishore Manilal Shah Endowment Merit cum Means Scholarship in Dyestuff Technology (for one UG student from First to Final Year) (Value of Rs. 4000/-)

X. DEPARTMENT OF PHARMACEUTICAL SCIENCES AND TECHNOLOGY

1. Dr. Krishna S. Manudhane Merit-Cum-Means Scholarship (One) (Rs.1,800/- each)
2. Dr. R.K. Dhote Charitable Trust Merit-Cum-Means Scholarship (Four) (Rs. 3,600/- each.)
3. Dr. Dhiren and Kailas Thakker Endowment Scholarship (Six) (Rs.11,000/-each.) (only for student from First to Final year B. Pharm. and B.Tech. (Pharma))

XI. GENERAL SCHOLARSHIPS ON YEAR TO YEAR BASIS

1. GunvatiJaganNath Kapoor Merit Cum Means Scholarship (11) (Value of Rs. 45,000/- each) from I, II, III, & IV year B.Tech. (Pharma), B.Tech. (Other Branches), B. Pharm and B. Chem. Engg.
B. Pharm. Pharmaceutical Sciences and Technology
B.Tech. Other Branches
B. Chem. Engg.
2. Mr. RajenMariwala Merit-Cum-Means Scholarship (One) (Value of Rs. 8,000/-)
3. Ambuja Cement Merit-Cum-Means scholarship (Fifteen) (Rs. 10,000/- each).
4. Sandra Shroff Merit-Cum-Means Scholarship (Ten) (Value of Rs.20,000/- each.)
5. "Dr. PurushottamJanardanKangle Merit-cum-means Scholarship" for SEVEN students from B.Tech. (Textile) and B.Tech. (Dyesstuff) (Rs. 3000/- each.)

XII. SCHOLARSHIPS AWARDED DIRECTLY BY THE OUTSIDE TRUST

1. Excellence Award of Rs. 1,00,000/- and Certificate of Merit under the NarotamSekhsaria Foundation (NSF) Scholarship Programme for Undergraduate studies in Engineering Rs. 50,000/-
2. Vishwanath Dore Scholarship (C/o ASRA Scholarship) (One) (Value decided by trust)
3. Arvind Memorial Scholarship (ASRA) (one) (only for F.Y. Chem. Engg. Student who have scored highest marks in chemistry at HSC examination) (Value decided by trust)
4. ISCMA Merit Cum Means Scholarship
 - i) Dyes – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
 - ii) Oils – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students(Rs. 5,000/- cash + certificate)
 - iii) Textile – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
 - iv) Surface coatings – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
 - v) Polymer – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
 - vi) Food – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)
 - vii) Pharma – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total –4 students (Rs. 5,000/- cash + certificate)
 - viii)B. Pharm. – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4students (Rs. 5,000/- cash + certificate)

ix) Chem. Engg. – 1st, 2nd, 3rd and 4th year – One student each, from 1st, 2nd, 3rd and 4th year total – 4 students (Rs. 5,000/- cash + certificate)

5. Engineers India Ltd. Scholarship One Rs. 36,000/p. a.

Our students have been placed in some of the following companies :





5.4 CENTRAL PLACEMENT CELL (ICT MUMBAI)

There is no chemical and allied industry in the country that does not employ graduates of the ICT. Alumni are at the helm of affairs of large number of renowned chemical industries. A placement cell is launched with the participation of the UDCT Alumni Association (UAA) to assist campus placement which begins in the month of July, and continues throughout the year, before the students graduate. The Institute's graduates are highly-sought after by the Indian and global chemical industry and their salaries rank among one of the competitive in the country, even dwarfing the salaries of graduates of the premier branded institutes; placements achieved via campus interviews fetch emoluments ranging from Rs. 4.50 to Rs 18.00 lakhs per annum. What is most striking is that these placements are in hard-core industries relevant to the students training and education, and not in the software industry, which has been a major source for employment for graduates of some of the best institutes in India. With regards to post-graduate research opportunities, a good number of our students are offered admission by some of the world's best universities to pursue post graduate studies. The Institute is one of the few institutions in Asia that is regularly represented in the graduate student bodies of prestigious institutes such as the Massachusetts Institute of Technology, Stanford University, University of California, Berkeley, Caltech, UCSB, Princeton, University of Michigan, Ann Arbor, University of Texas, Carnegie Mellon University, Purdue University, University of Massachusetts, Cambridge University, Imperial College, Manchester University, University of Twente, Monash University, to name a few. All of them receive full financial support. Several universities write to us to recommend good students. Leading foreign universities have signed MOUs for student exchange through proper support for the exchange. This would not have been without the merit of the students, and reputation of faculty and institute. On an average, about 75 students from various degree programmes get such fellowships. Quite a few Ph.D. holders go abroad for post- doctoral studies in reputed institutes; this is directly linked to the quality of research produced and personal standing of the faculty in international community.

Institute has very active Training and Placement Cell which was started under the guidance of Vice Chancellor, Prof. G. D. Yadav in 2010 to organize all the placement and training activities at a central place. It is supported by UAA (UDCT Alumni Association). Prof. Anant Kapdi (Department of Chemistry) is Central Placement coordinator who is assisted by faculty coordinators and student coordinators from each Department. Placement at ICT is a regular year- long activity. Companies from various fields evinced interest in recruiting students from ICT at both, bachelor's and master's levels. ICT has always been a favorite hunting ground for corporates wishing to hire bright young engineers and technologists.

Dr. Anant Kapdi

(FRSC, FMASc, AVH Fellow)

Central Placement Coordinator, (ICT Mumbai, ICT - IOCB, and ICT - MARJ)

Former Founding Deputy Director (ICTM-IOCB)

UGC-FRP

Assistant Professor - Department of Chemistry,

email: ar.kapdi@ictmumbai.edu.in (official)

5.4.1 INDUSTRIAL INTERNSHIP:

ICT Mumbai Campus

All 3rd year UG students of B. Chem. Engg., B. Tech. and B. Pharm. undergo 6 weeks in-plant industrial training in various industries. In the academic year 2018-2019, they were placed in about 120 different industries.

All masters students of M.Tech., M.E. and M.Sc. (Science) undergo Industrial internship from two-six months. In the academic year 2019-20, masters students were placed in about 100 different industries for industrial internship programme.

5.4.2 OUR STUDENTS PLACED IN SOME OF THE FOLLOWING COMPANIES:

5.4.3 HIGHER STUDIES:

Many of ICT bachelor students also prefer to go for higher studies outside and almost all the students get fellowship for higher studies.

Some of the Universities where ICT students have got admission are as follows:





ICT Mumbai - IndianOil Odisha Campus, Bhubaneswar



MESSAGE FROM THE DIRECTOR



Greetings from the Institute of Chemical Technology, Indian Oil Odisha Campus, Bhubaneswar, one of the off campuses of Institute of Chemical Technology (then UDCT), Mumbai. The campus was started in 2018 with a unique programme, Integrated M. Tech. after 10+2 in Chemical Engineering as Major and Minor in six different branches of Chemical Technology. From this campus, we also offer M. Tech. programme (Two Years) in various branches of Chemical Technology and Ph. D. in Science/Technology. In view of the massive investment in energy, petrochemicals, chemicals, polymers, textiles, minerals, materials, biotechnology and pharmaceutical industries and food industries in Odisha, ICT Mumbai was requested to open a campus

in Bhubaneswar. Indian Oil Corporation Ltd took a historic decision to support fully a campus of ICT in Bhubaneswar. This is the first of its kind in India where a corporate house has decided to support innovative education and research under its CSR policy to create manpower and job opportunities and entrepreneurs and skill development centres in Eastern India. The campus is equipped with modern equipments for carrying out high-class research and innovation at Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, and Food etc. The nation, at large, will benefit from this initiative.

Our endeavour is not only to provide access to quality education and training but also to create an individual who can earn sustainable livelihood.

Our Vision and mandate is to develop a self-sustainable institution with sophisticated and high-end research facilities in the field of Chemical Technology and its allied branches and to produce well-trained engineers and extraordinary researchers.

Placement of students from first batch of iMTech, Two Year MTech, and PhD scholars has also been progressing well in leading and globally renowned industries and academic institution in India and abroad.

Professor Pradeep Vavia

B. Pharm., M.Pharm., Ph.D. (Tech), FIPA, FMASc

Professor of Pharmaceutics

DIRECTOR, ICTM-IOC Bhubaneswar



IMPORTANT INSTRUCTIONS

1. Candidates are requested to visit JoSAA2023 portal frequently for time-to-time updates for admission to Integrated MTech in Chemical Engineering Programme for AY 2023-2024 as ICTM-IOC Bhubaneswar conducting admission to iMTech course based on JEE (Main) ranking through JOSAA. <https://josaa.nic.in/>
2. Please read carefully the instructions to candidates by JoSAA before filling the application form. <https://josaa.nic.in/>
3. Merit list/ schedule of admission rounds for the Integrated MTech course will be displayed on JoSAA portal. Please note that no individual correspondence will be made in this regard and it is the responsibility of the candidates to visit the webpage regularly. <https://josaa.nic.in/>
4. Pleading ignorance about information displayed on the web shall not be entertained.
5. Admission to hostel will be based on the availability of rooms at Khosla hostel.
6. Merit is the only criterion for admission to any course and seats are reserved as per the directives from JoSAA.
7. Candidates are requested to refer section 6.7 for instructions regarding the admission procedure for Regular MTech/MSc, Executive MTech, and PhD programme at ICTM-IOC Bhubaneswar.
8. There are no agencies operating on behalf of the institute and there is no capitation fee or donation in regard of admissions. Be careful of any persons claiming to offer admission to the ICTM-IOCB or knowing authorities. No extraneous considerations should be brought to exert pressure on the Admission Committee. It will be strictly dealt with. We take pride in fairness and openness in admissions and all matters and give justice to one and all.
9. All correspondence regarding admissions to programmes other than iMTech should be addressed to the Registrar, Institute of Chemical Technology, Nathalal Parekh Marg, Matunga, Mumbai-400019 (admission@ictmumbai.edu.in; +91-22-33611111/ 2222; Fax: +91-22-33611020).

APPROACH ROUTES TO ICT-IOC, BHUBANESWAR AND LANDMARKS

A location map of the ICT-IOC, available on Google maps, is provided above and the various access routes are described from nearby railway stations, bus stops and the airport.

Landmarks in the vicinity of ICT-IOC

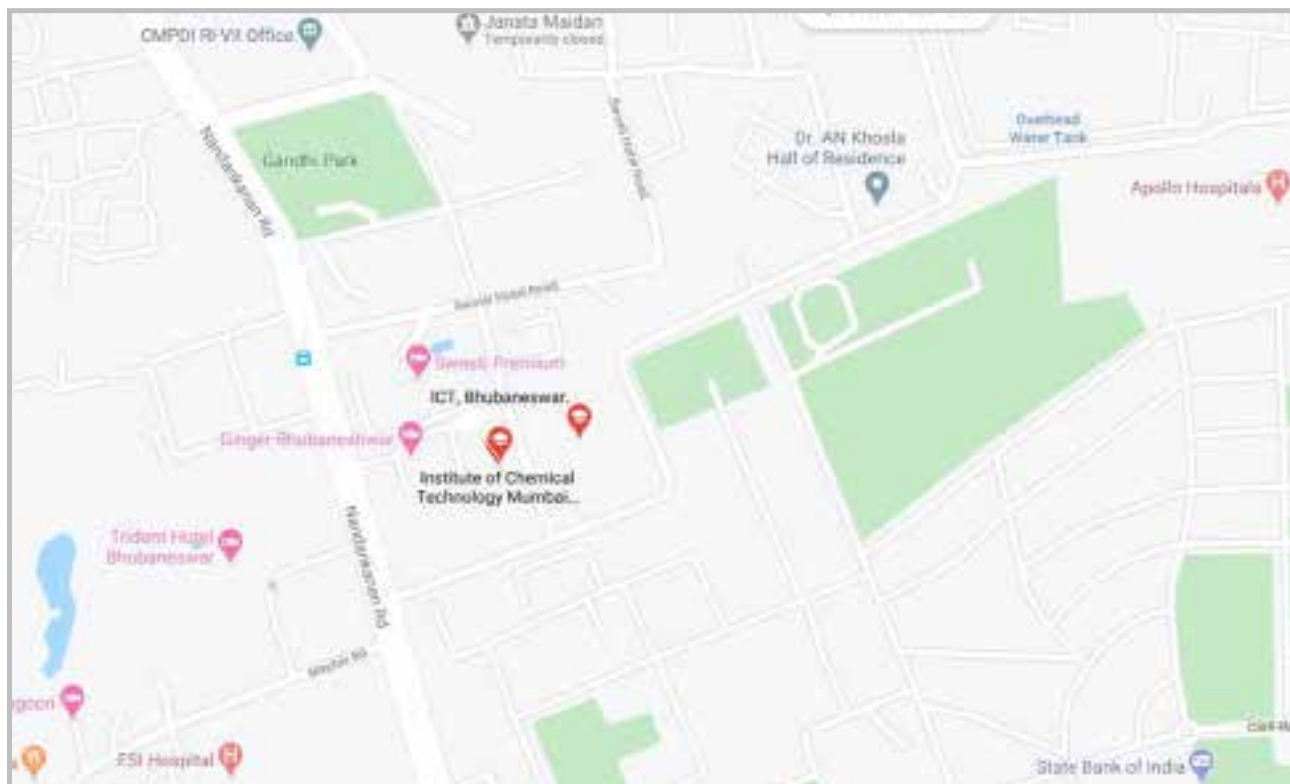
ICT-IOC, currently running its classes from the Extension Centre campus of IIT-Kharagpur at the Temple City, Bhubaneswar is situated just behind the famous 5-star luxury Hotel named “Swosti Premium”. The Hotel is situated on the right side of the Jayadev Vihar to Nandankanan Main Road.

A. From Bhubaneswar Railway Station (Main Station)

The ICTM-IOCB can be reached in about 15 minutes on the main road from Master Canteen Square towards Jayadev Vihar- Nandankanan Main Road. Main Railway Station is also accompanied by the Govt. Bus stand to its adjacent, as a result Govt. Buses are readily available in this route.

B. From Biju Patnaik International Airport (Bhubaneswar Airport)

It is about 25 minutes by road from the only Airport of Bhubaneswar. Cabs and Govt Buses are easily accessible which directly ply through the road connecting the Institute.



MANAGEMENT OF ICTM-IOC BHUBANESWAR

The Director reports to the Vice Chancellor for overall directions and is guided by two committees, namely, Executive Committee, and Advisory Committee.

EXECUTIVE COMMITTEE

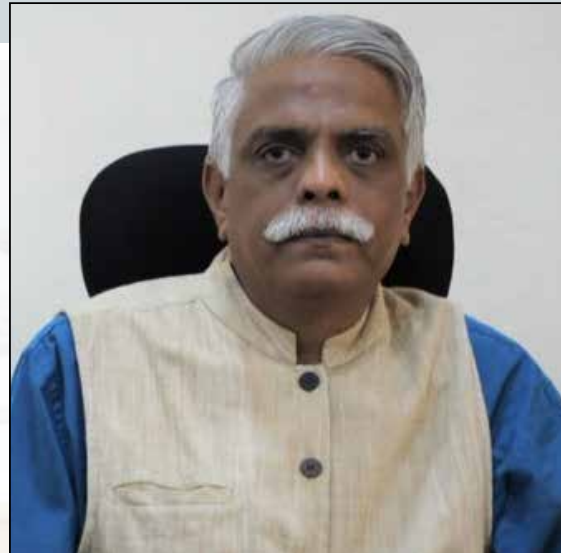
1. Professor A. B. Pandit, Vice Chancellor, ICT Mumbai (Chairman)
 2. Professor P. R. Vavia, Director, ICTM-IOC Bhubaneswar (Member Secretary)
 3. Professor A. V. Patwardhan, Dean (Academic Programmes), ICT (Member)
 4. Professor R. R. Deshmukh, Registrar, ICT (Member)
 5. Shri. Mukesh Mohan, Executive Director, Paradip Refinery Head, IOCL (Member)
 6. Shri. Subimal Mondal, Executive Director I/c(HR), IOCL (Member)
 7. Shri. S. K. Sarangi, Associate Dean, Industries, ICTM-IOC Bhubaneswar (Member)
- (A few eminent persons are invited as special invitees. The Committee meets more frequently to monitor progress of the campus activities including ICT policies and Advisory Committee decisions)

ADVISORY COMMITTEE

1. Shri. Shrikant Vaidya, Chairman, Indian Oil Corporation Limited (Patron-in-Chief)
 2. Professor A. B. Pandit, Vice Chancellor, ICT Mumbai (Chairman)
 3. Professor Damodar Acharya, Former Director, IIT-Kharagpur, Former Chairman, AICTE, Former Vice Chancellor, Biju Patnaik University of Technology (Member)
 4. Shri. Sujoy Choudhury, Director (P&BD), Additional charge of Director (HR), IOCL (Member)
 5. Dr S. S. V. Ramakumar, Director (R&D) IOCL (Member)
 6. Professor P. R. Vavia, Director, ICTM-IOC Bhubaneswar (Member Secretary)
- (A few eminent persons are invited as special invitees. The Committee meets twice a year)

FACULTY PROFILE

ICT Mumbai - IndianOil
Odisha Campus, Bhubaneswar



PROFESSOR PRADEEP VAVIA

*B. Pharm., M.Pharm., Ph.D. (Tech),
FIPA, FMASc*

Professor of Pharmaceutics

DIRECTOR, ICTM-IOC Bhubaneswar



Prof. P. R. Vavia

B. Pharm, M. Pharm, PhD. (Tech), FIPA, FMASc

Director, ICTM-IOC Bhubaneswar and Professor of Pharmaceutics

Subjects Taught:

Pharmaceutics, Drug Delivery systems, Advanced Pharmaceutics, Biopharmaceutics and Pharmacokinetics

Research Interest:

Cyclodextrin based drug delivery systems, Nanosponge based drug delivery system, Transdermal drug delivery system. Protein and Peptide drug delivery system, Lipid based colloidal formulations, Polymer synthesis for drug delivery. Modified release films, Melt extrusion technology, Oral liquid dosage forms, Oral modified release systems, Techniques in solubilization, Soft gelatin capsules, Bio- conjugates for active targeting, gene delivery

Recognized research guide for: Ph.D. 43, Masters: 56

Total Research Publications (Scopus):

National: 21, International: 116,

H-Index : 28, Citations: 2806

Patents: International: 3 [PCT (Granted: 1; Applied: 2)]

National: Granted: 8, Applied: 30

AWARDS:

- Best Teacher's Award 2018.
- Global RESOMER Award 2017 for developing the "Novel bilayer dissolving microneedle arrays with concentrated PLGA microparticle to targeted intradermal delivery: Proof of concept".
- Best Teacher's Award 2016.
- VASVIK Award in the category of Biological Sciences and Technology, for developing the Novel Drug Delivery Systems, Synthesis and application of novel polymers and excipients and targeted drug delivery in cancer treatment, January 2015

Dr Rambabu Dandela

Ph. D.

Assistant Professor

Subjects Taught:

Organic chemistry. Analytical chemistry and Advanced Pharmaceutical Chemistry

Research Interest:

Our research interests use organic synthesis to make novel small molecules, which can be utilized to understand and exploit biological systems, chemical biology, quorum sensing, chemical proteomics, pharmaceutical cocrystals, and process R&D of Active Pharmaceutical Ingredients (API)

Recognized research guide for: Chemistry

Guided students: PhD (4 completed, 5 ongoing including 1 Prime Minister Doctoral Fellow),

Masters: 5 (completed). Postdocs 2 (1 ongoing)

Total Research Publications (Scopus): 147

H-Index : 28, Citations: 2292

Number of patents (Filed/Granted): 9

Awards:

1. Life Fellow of Indian Chemical Society (ICS No: 8427, 2021)
2. Associate Member of Royal Society of Chemistry (AMRSC, ID: 691547, 2021)
3. Lifetime Patron Member Orissa Chemical Society (PM/191/20, 2020)
4. Lifetime Member Proteomics Society, India (PSI/LM534, 2020)
5. Lifetime Member Chemical Research Society of India. (CRSI, 2020)
6. Lifetime Member Indian Crystallographic Association (LM 754, 2020)
7. Lifetime Member Indian Council of Chemists (ICC, 2020)
8. Member of International Chemical Biology Society (ICBS, 2020)
9. Lifetime Member National Environmental Science Academy (LM2207, 2020)
10. Lifetime Member Association of Chemistry Teachers (ACT, 2020)



Dr. Ramakanta Naik*Ph. D. (Physics)***Associate Professor****Subjects Taught:**

Physics

Research Interest:

Nanostructured Materials, Nonlinear optics, Optoelectronics, Amorphous thin films, Phase transitions

Recognized Research Guide for Physics**Guided students:** Ph D: 5 Completed, 6 Ongoing M.Phil.: 10, M.Sc. Tech: 13

Total Research Publications (Scopus): 160, H-Index :26, Citations: 1627

Awards:

- DST-INSPIRE Faculty Award
- Young Scientist Award by Orissa Physics Society

**Dr. LISA ROY***Ph.D.***Assistant Professor****Subjects Taught:**

Organic, Inorganic, Physical, Computational Chemistry

Research Interest:

Bio-inspired homogeneous catalytic reactions Small molecule activations Gas storage and surface reactions Non-covalent interaction guided catalysis and selfassembly

Recognized research guide for: Computational chemistry

No of publications: 39

Guided students: 3 (Ph.D. Continuing). 10 (Project and Internships)

Total Research Publications (Scopus):

H-Index : 13, Citations: 498

AWARDS:

- Early Career Advisory Board Member of ChemPlusChem (Wiley VcH), Jan 2023-present;
- SERB POWER (Promoting Opportunities for Women in Exploratory Research) Grant, 2021;
- Early Career Advisory Board Member of ChemPlusChem (Chemistry Europe Society. Wiley VcH) Jan 2021-present;
- Visiting Researcher at the Max Planck Institute for Coal Research, Germany (July 2019);
- DST INSPIRE Faculty Fellowship (2017) in Chemical Sciences Division;
- Offered Postdoctoral Fellowship at The Hebrew University of Jerusalem (2017);
- Max-Planck Postdoctoral Fellowship July 2015 - Oct 2017;
- International Travel Support from SERB in 2012 for participating at the 48th STC held at KIT in Germany;
- Qualified the Graduate Aptitude Test in Engineering in 2010;
- Qualified the Joint CSIR-UGC National Eligibility Test 2009.
- CSIR fellowship JRF/SRF from July 2010 - June 2015;
- Qualified State Eligibility Test (2009) held by West Bengal College Service Commission for Lectureship;
- Awarded Motilal Nath Award (2007) by Vivekananda College for excellence in B.Sc. examination



DR. SWAGAT MOHAPATRA

Ph. D.

UGC-Assistant Professor

Subjects Taught:

Chemistry

RESEARCH INTERESTS:

Organic and Organometallic materials for electronic and energy devices

Recognized Research Guide for Chemistry

Guided students: Ph.D: 5 Completed. 6

Ongoing M.Phil/O M.Sc. Tech: 13

Total Research Publications (Scopus): 28

No. of patents (Filed/Granted): 1

H-Index :17, Citations 251

Dr. Sanjib Kumar Acharya

PhD

Assistant Professor

Subjects Taught:

Mathematics I, II. Engineering application of computers I. II. III

Research Interest:

Engineering Mathematics and Engineering application of computers

Recognized research guide for: Mathematics

Guided students: PhD (2)

Total Research Publications (Scopus): 4

H-Index : 2, Citations: 10



Dr. Saikat Bhaumik

Ph.D.

Assistant Professor

Subjects Taught:

Physics

Research Interest:

Nanomaterials. Materials Science, Photophysics, Device Physics, Bioimaging

Recognized Research Guide for Physics

Guided students: 5 (PhD)

Total Research Publications (Scopus): 30, H-Index : 14. Citations: 1555

Number of patents (Filed/Granted): 1

AWARDS:

DST-Inspire Faculty. NET-CSIR fellowship.

Postdoctoral fellowship from NTU Singapore

Dr Nimai Mishra

PhD

Associate Professor

Subjects Taught:

functional materials introduction to materials technology

Research Interests:

Synthesis and optoelectronic application colloidal semiconductor nanocrystals

Recognized research guide for: Mathematics

Guided students: PhD (3)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 40

H-Index : 21, Citations: 1073

Awards

- Associate fellow of Andhra Pradesh AP Academy of Sciences AFAPS for the year 2019
- Young scientist award at international conference on functional nanomaterial 2019 February (22-26) organised by IIT BHU Varanasi IIT Guwahati and Society for Interdisciplinary Research in Materials and Biology (SIRMB)



Dr Kanchan Chowdhury

PhD

Senior Professor

Subjects Taught:

Thermodynamics, Advanced Thermodynamics, English For Communications, Cryogenic Liquefaction, Cryogenic Refrigeration, Cryogenic Air Separation, Downstream LNG Technology, Refrigeration Systems, Safety in Cryogenic Processes, Heat Exchangers

Research Interests:

Energy analysis of process plants fire safety in hospitals and chemical installations, refrigeration, heat exchangers, cryogenic refrigeration, cryogenic liquefaction, cryogenic air separation, Downstream LNG technology

Recognized research guide for: Chemical Engineering

Guided students: PhD (11)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 86

H-Index : 19, Citations: 925

Dr Ayantika Sett

PhD

Assistant Professor

Subjects Taught:

Momentum Transfer, Heat Transfer, Chemical Process Control, Chemical Engineering, Thermodynamics, Separation Processes

Research Interests:

Waste Valorisation, Waste Water Treatment, Application of microfluids in waste treatment and biofuel production, paper based microfluids devices.

Recognized research guide for: Chemical Engineering

Guided students: PhD (2), iMTech (8)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 6

H-Index : 5, Citations: 62



Dr. Ritesh S Malani

PhD

Assistant Professor



Subjects Taught:

Reservoir Engineering, Petroleum Refining, Refinery Engineering, Natural Gas Engineering, Petrochemicals, Research Methodology, Mass Transfer Operation

Research Interest:

Upgradation of Crude Oil, Recovery of Phosphoric Acid from Phosphogypsum, Bio based polyols and polyurethane thereof, Biodiesel synthesis, Heterogenous Catalysis, Cavitation Processes, etc.

Recognized research guide for:

Petrochemical and Energy Engineering
Guided Students: Master (1 completed, 1 On going)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 24

H-Index : 13, Citations: 649

Awards:

- Received 2nd award in open category during NGIC 2020, organized by HPCL Green R&D centre, Bengaluru,
- Received Best Paper Award during LAMSYS-16 at Satish Dhawan Space Centre (SDSC) SHAR-Indian Space Research Organisation (ISRO), Sriharikota, Anadhra Pradesh, India,
- Received Ambuja Young Researcher's Award for doing postgraduate studies in India after qualifying national level (GATE) entrance examination



Dr Chayan Sarkar

PhD

Assistant Professor

Subjects Taught:

Momentum Transfer, Chemical Reaction Engineering, Advanced Transport Phenomena, Advanced Chemical Reaction Engineering, Mathematical Methods in Chemical Engineering.

Research Interest:

Adsorption, photo catalysis, smart materials modelling and simulation

Recognized research guide for: Chemical Engineering

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 6

H-Index : 5, Citations: 184

Dr Smritilekha Mishra

PhD

Assistant Professor



Subjects Taught:

Nanomaterials, Polymer Science and Technology, Materials Processing, Introduction to Materials Technology

Research Interest:

Polymer Nanocomposite, Surface Modification of Nanoparticles, Bio materials, Plastic Recycling

Recognized research guide for: Materials and polymer engineering

Guided Students: PhD (1), iMTech (4)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 15

H-Index : 5, Citations: 66

No. of Patent Filed: 2

Awards:

- ICT Golden Jubilee Research Fund Award 2022-23
- NCTU Taiwan Elite Scholarship 2019 to Carry out Research Work at NCTU, Taiwan
- 3rd Position in Oral Presentation at YRS 2019 IIT Delhi
- Consolation Award Open House Demonstration 2018 IIT Delhi
- 3rd Position in Masters Degree 2015 CIPET Ahmedabad
- Consolation Award at APM-2013 International Conference Lucknow
- 2nd Position in Undergraduate ORAL Talk Vidyansh 2012 CIPET Bhubaneswar



Dr. Sanchari Basu

Ph.D.

Assistant Professor

Subjects Taught:

Industrial Catalysis, Renewable Energy Systems, Conventional Energy and Utilisation, Petrochemicals Technology, Materials and Energy Balance Calculations

Research Interest:

Heterogeneous Catalysis, Reaction

Engineering, Petroleum Refining

TOTAL RESEARCH PUBLICATIONS: 5

Number of Students Guided: 2 (Ongoing iMTech)

Number of patents (Filed/Granted) : 1 Granted

H-Index: 5, Citations: 106

Dr. Shivanand Shankarrao Shirkole

PhD

Assistant Professor

Subjects Taught:

Advances in Food Technology, Food Packaging Science and Technology, Experimental Design and Optimisation in Food Engineering, Introduction to Food Technology Food Processing and Technology I, and Food Processing and Technology II

Research Interest:

Low moisture food safety, Thermal processing of food, Phase transition modeling, Computer aided food engineering, Industries scale process optimisation, Automation in food process operation

Recognized research guide for: Food process engineering

Guided Students: MTech-FET (7 Thesis submitted), iMTech (9)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 34

H-Index : 9, Citations: 280

No. of Patent Filed: 2 (1 granted, 1 filed)

Awards:

- Best research award at MTech Agril Engineering level during the academic year 2009-10 by Dr Punjabrao Deshmukh Krishi Vidyapeeth, Akola Maharashtra, India
- Best paper presentation award at 10th Asia Pacific Drying conference (ADC 2019) held at Vadodara, India, (December 14-17, 2019)
- Certificate of recognition for his outstanding service to enhancement of drying R&D and highly significant extensive contribution to the journal in guest editing special issues, his guest editorials editing of numerous free downloadable e-books on drying as well as books in the CRC book series entitled 'Advances in Drying Technology.'



Dr. Pranati Nayak

PhD

Assistant Professor (Ramanujan Fellowship)

Subjects Taught:

Physics

Research Interest:

Material Electrochemistry, 2D Materials (Graphene, Transition Metal Carbide-MXenes) Synthesis, and Application on Flexible Bio Sensors, Graphene Based Device Fabrication, Fundamental Electrochemistry of 2D Materials, Single Entity Electrochemistry

Recognized research guide for: Physics

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 5

H-Index : 17, Citations: 1326

No. of Patent Filed: 1 granted

Awards:

- 2022 Ramanujan Fellowship SERB, DST

Government of India

- 2018 Newton International Fellowship Royal Society UK 2018 India
- 2018 JSPS post doctoral fellowship Japan
- 2016 DST inspire faculty award DST Government of India
- 2015 Professor A L Laskar award for the best PhD thesis in physics IIT Madras. (Medal+certificate+ INR 5K cash prize)
- 2015 Institute Research Award Dean Academy Research IIT Madras (Certificate + INR 20k cash prize)
- 2012 best poster price in the international conference 'Advanced Nanomaterials ANM 2012' (certificate + INR 3K cash price)
- 2009 GATE 2009 in physics- a national level examination for pursuing a PhD by MHRD Government of India



Dr Pyarimohan Dehury

PhD

Assistant Professor

Subjects Taught:

Project Management and Economics in Chemical Industry, Energy Management

Research Interest:

EV Battery, Thermal Management, Design of Heat Exchangers and Simulation using

Aspen Plus.

Recognized research guide for: Energy Engineering

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 9

H-Index : 7, Citations: 126

Number of Patent: 3

Dr Yatin Gadkari

PhD

Assistant Professor

Subjects Taught:

Advanced Pharmaceutical Chemistry, Drug Delivery Technology, Technology of Fine and Specialty Chemicals, Advanced Pharmaceutical Technology, Active Pharmaceutical Ingredients Technology, Medicinal Chemistry

Research Interests:

Drug Discovery and Development, Drug Design, Nanodrug Delivery System, Methodology Development, Process

Intensification

Recognized research guide for:

Pharmaceutics

Guided Students: 8

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 14

H-Index : 5, Citations: 56

Awards:

TEQUIP Research Fellow, Received International grant from Korean Society of Ginseng, South Korea



Dr Ramesh Devarapalli

PhD

Assistant Professor

Subjects Taught:

Electrical Technology, Electrical Power Systems, Electrical Machines

Research Interest:

Power Systems, Electrical Engineering.

Recognized research guide for: Electrical Engineering

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 63

H-Index : 13, Citations: 537

Ashish Adak

PhD

Assistant Professor

Subjects Taught:

Mathematics I, Mathematics II, Process Simulation Lab-1

Research Interests:

Non-linear Wave Phenomena, Nonlinear Dynamics, Nonlinear Plasma Theory

Recognized research guide for:

Mathematics

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 9

H-Index : 5, Citations: 104

Awards:

UGC- Dr Kothari Postdoctoral Fellowship (DSKPDF); National Postdoctoral Fellowship (NPDF), SERB, DST, Govt of India



Dr. Abhay Vijay Kotkondawar

Ph.D.

Assistant Professor

Subjects Taught:

Physical Chemistry, Inorganic Chemistry, Pharmaceutical Analytics, Industrial and Engineering Chemistry

Research Interest:

Photocatalytic Process, Water Splitting Reaction, Electrocatalytic Process,

Environmental Pollution Direction and Monitoring

Recognized research guide for: Applied Chemistry

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 7

H-Index : 5, Citations: 67

Dr. Kruthi Doriya

PhD

Assistant Professor

Subjects Taught:

Biochemical Engineering, Bioprocess Engineering and Technology, mass transfer operations, introduction to biological science and engineering, advanced biochemistry, microbiology/biochemistry

Research Interests:

Biochemical Engineering and Allied Areas

Recognized research guide for: Chemical Engineering

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 8

H-Index : 7, Citations: 660





Dr. NABENDU B PRAMANIK

Ph.D.,

Assistant Professor

Subjects Taught:

Organic Chemistry, Organic and Inorganic Chemistry Practical, Polymer and Materials Science

Research Interests:

Organic Polymeric Materials, Bottle-brush Polymers via ROMP, Polyelectrolytes Multilayer, Hyper-thin membranes for the separation of CO₂, Self-healing polymers, Polymeric Architectures via RAFT, ROMP, ATRP etc.

Recognised Research Guide for: Chemistry

TOTAL RESEARCH PUBLICATIONS: 17

H Index: 9, Citations 257

Awards:

Got One Consultancy Research Project from: Nayam Innovation Pvt Ltd, Pune

Dr. SUSHMA CHAKRABORTY

PhD

Assistant Professor

Subjects Taught:

Heat Transfer, Environmental Engineering and Process Safety, Process Development and Engineering, Equipment Design and Drawing, Material Science and Engineering, Chemical Engineering Lab.

Research Interests:

Membrane Separation, Material Synthesis, Waste Water Treatment, Food Processing
Recognised Research Guide for: Chemical Engineering

No. of Students guided: 12 (ongoing iMTech)

TOTAL RESEARCH PUBLICATIONS (SCOPUS): 8

H-Index : 5, Citations: 121



Dr. ARANYA MALLICK

PhD

Assistant Professor

Subjects Taught:

Textiles

Research Interests:

Textiles, Polymers, Water Treatment, Natural Multifunctional Colours

Recognized Research Guide for: Textile Engineering.

Guided students: 8 ongoing (iMTech)

Total Research Publications (SCOPUS): 15

Conference Proceedings: International: 25 National: 32

H-Index : 5, Citations : 100

VISITING FACULTY



Dr. ASIMA RAFIQ

Ph.D. (Scientist, Division of Food Science and Technology, Sher-e-Kashmir University of Agricultural Sciences)

Subjects Taught:

Food Toxicology

Research Interests:

Functional Foods, Extrusion Technology and Novel Food Processing

No. of Students Guided: 4

TOTAL RESEARCH PUBLICATIONS: 15

H Index: 7, Citations 563

Awards:

DBT BIO CARE Project



Dr. SYED ZAMEER HUSSAIN

Ph.D. (Professor and Head, Division of Food Science and Technology, Sher-e-Kashmir University of Agricultural Sciences)

Subjects Taught:

Advances in Nutrition

Research Interests:

Food Fortification, Extrusion Technology, Functional Foods, Novel Food Processing Techniques, Non destructive Food Quality Evaluation, Machine Designing

No. of Students Guided: 18

TOTAL RESEARCH PUBLICATIONS: 15

H Index: 16, Citations 1155



DR. RAMAJANAKI IYER

BPharm(UDCT), MMS (Master of Management Studies), Ph.D (Organizational Behaviour) Faculty (Management)

Assistant Professor

SUBJECTS TAUGHT :

Industrial Psychology, Human Resources Management, Industrial Management (General management and Marketing management), Perspectives of Science Technology and Society, Biostatistics (usage of software SPSS), Communication Skills and ethics.

RESEARCH INTERESTS:

Stress management, Defense mechanisms, Addiction behaviours, Environmental studies and societal impacts, Interplay of science technology and society.

Total research publications: National: 01, International: 17

AWARDS:

Dr Rajadhyaksha Best Teacher's award for Final Year B Chem Engg, ICT Mumbai (2018-19)

Best Teacher's award, Final BTech, ICT Mumbai (2017-18).



Dr. GIRISH MUKUND KHANDEKAR

*B.Sc., (Chemistry/Physics) - University of Mumbai
B.Sc.(tech) Pharmaceuticals & Fine Chemicals - UDCT, Univ. of Mumbai
MSc (tech) Pharmaceuticals & Fine chemicals - UDCT, Univ. of Mumbai
PhD(tech), Pharmaceuticals & Fine chemicals - UDCT, Univ. of Mumbai
Post-Doctoral Research - DysonPerrins Laboratory, OXFORD, UK*

Work Experience & Achievements:

2016 Till Date:	Work as a freelance consultant for process designing, process improvement, structural elucidation, effluent treatment etc. In addition to this engaged with ICTs, IITs and universities as an external faculty and as an examiner for thesis of M.Tech., PhD students.
2015- 2016:	Joined as President R&D, Atul Limited, Valsad.
2005- 2014:	Joined as V.P.-R & D and retired as Sr. V.P.-R&D from Indofil Chemical Company.
2004- 2005:	Worked as V.P.-R & D and Business Development with Innovassynth Technologies Ltd., Khopoli.
2001- 2004:	Joined as G.M.-R & D in duphar-interfran ltd, Thane in November 2001.
1999- 2001:	Joined Zandu Chemicals Ltd. In October' 1999 as GM-R & D.
1998- 1999:	Joined Sekhsaria Chemicals Ltd, Dombivali as GM-R&D.
1987- 1998:	Joined as a scientist in NOCIL R&D. Left NOCIL as Manager- R & D in NOCIL in 1998

DR. TOGAPUR PAVAN KUMAR

B.Sc. Osmania 2002, M.Sc. Osmania 2004, Ph.D. Osmania (CSIR-IICT) 2011, PG Diploma in Patents Law- NALSAR 2014

Senior Scientist, Coordonator-IPR/ Convener-Business Development/ Manager- InTEC, CSIR-Institute of Minerals and Materials Technology (IMMT), Bhubaneswar- 751013, Odisha, India

Area of Interests:

Basic Research: Organocatalysis-Asymmetric Synthesis, Nucleic Acid Chemistry, Process Chemistry, Medicinal Chemistry, Natural Product Synthesis and Flow Chemistry

IP Management and Business Development: Patent Searches and Analytics using various databases/ SNT Search and Markush Structure Analysis/ Patent Drafting and Portfolio Management

Academic Teaching: Organic Chemistry Courses and Intellectual Property (IIP), Patent Search and Analytics

Technology Development: Process/Technology Development and Demonstration, Client Management, Project Execution and Monitoring, Documentation and Result Submission etc.



SUBHAPRADA NISHTALA

MSc Food Technology, CFTRI

Director In-charge, ITCFSAN (setup jointly by FSSAI and EIC)



Subjects Taught:

Food Safety & Regulations

AWARDS:

AFST(I) FSSAI Food Safety Professional of the Year 2019

Professional Services: Regulatory Advice, Training.

Professional Membership: AFST(I) – President, Mumbai Chapter



DR. SHANTANU KRISHNARAO SAMANT

Ph.D. Tech. (Food Technology)

Mondelēz International Ltd.

Subjects Taught:

Carbohydrate Chemistry & Technology, Biotechnology of Fermented Foods

Research Interests:

Food products, carbohydrates- protein interactions, specialty fats & its applications.

TOTAL RESEARCH PUBLICATIONS – National: 05, International: 08

Conference Proceedings - National: 02

AWARDS:

Received 5 awards from company – Mondelēz International Ltd

Professional Services: Visiting faculty- ICT (from 2017 – present);

Research Council member CFTRI (2013- 2015),

Regulatory Committee member PFNDAI (past),

Research Committee member for Food Tech Dept, ICT (past),

Professional Membership: Life Member AFST(I)

Central research facility at ICTM-IOC Bhubaneswar



Central research facility at ICTM-IOC Bhubaneswar





Faculty Members, ICTM-IOC Bhubaneswar



Supporting staff at ICTM-IOC Bhubaneswar



UG & PG laboratory at ICT-IOC, Bhubaneswar



UG & PG laboratory at ICT-IOC, Bhubaneswar



Central Library at ICTM-IOC Bhubaneswar



Technological Association Team with Vice-President Dr. Ayantika Sett



Bus facility at ICTM-IOC Bhubaneswar



Faculty-student's classroom interaction at ICTM-IOC Bhubaneswar



Prof. Pradeep Vavia, Director, ICTM-IOC Bhubaneswar while interacting with CEP participants sponsored by PCI, New Delhi



PhD Research Scholars at ICTM-IOC Bhubaneswar



MTech-Food Engineering and Technology Students of 2020 and 2021 batch (left) and 2022 batch (right)



MTech-Pharmaceutical Chemistry and Technology Students of 2021 batch (left) and 2022 batch (right)



Integrated MTech (Chemical Engineering) Students of 2018 batch



Integrated MTech (Chemical Engineering) Students of 2019 batch



Integrated MTech (Chemical Engineering) Students of 2020 batch



Integrated MTech (Chemical Engineering) Students of 2021 batch



Integrated MTech (Chemical Engineering) Students of 2022 batch

Co-Curricular activities of students at ICTM-IOC



Basketball team (Left) Table tennis event at hostel (Right)



Rangoli competition organized by Cultural club of ICTM-IOC



Cultural performance by ICTM-IOC students including I.Mtech and M.tech (Food and Pharma)

Internship (National/International) for I.Mtech ICTM-IOC Students

National



Every alternate Trimester ICTM-IOC students undergo internship training at different industries and research institute (Some of them are quoted above)

International

INSTITUTE OF CHEMICAL TECHNOLOGY
INDIANOIL ODISHA CAMPUS BHUBANESWAR

HEARTIEST CONGRATULATIONS TO THE STUDENTS SELECTED FOR MITACS GLOBALINK RESEARCH INTERNSHIP AWARD 2023, SPONSORED BY CANADIAN GOVERNMENT.

 Jyotisman Rath Laser Ablation for Energy Storage Devices (University of Waterloo)	 Kautilya Jha Renewable Polymer based Packaging materials with enhanced functional properties (University of Manitoba)	 Rishika Mohanty Conversion of Fats and Lipids to biogas fuel (University of Alberta)
 Anushka Shrivastava A new look into food waste: Nutritious and eco-friendly extrudates (University of Manitoba)	 Meyappan K Preparation of ion batteries (Université de Montréal)	 Sancia Morris Optimization of Biofilm and Hydrodynamics for Anaerobic Digestors (York University)

The MITACS Globalink Research Internship is a 12-week fully-funded research opportunity that enables students to carry out research on particular projects in renowned Canadian universities after being chosen from among over 27000+ applicants globally through a rigorous application and interview procedure.

INSTITUTE OF CHEMICAL TECHNOLOGY
INDIANOIL ODISHA CAMPUS BHUBANESHWAR

HEARTIEST CONGRATULATIONS TO THE STUDENT SELECTED FOR THE DAAD-BMBF-DST INTERNSHIP AWARD 2023, SPONSORED BY THE INDIAN AND GERMAN GOVERNMENT

Ashish Joshi
Investigations of multiphase reactions based on renewable feedstocks
(RWTH Aachen University)

The DAAD-BMBF-DST Internship award is a fully-funded scholarship awarded to students and researchers whose projects on sustainability issues benefit from a research exchange to Germany. Only 20-25 students are selected each year for this fellowship.

This collaboration and fellowship was carried out and facilitated by the International Relations Cell.



ICTM-IOCB Bhubaneswar Campus received Odisha Education Leadership Awards 2023

6.1 INNOVATIVE PROGRAMMES AT ICTM-IOC BHUBANESWAR

As it was stated elsewhere, ICT has added two campuses from 2018-19, this being one of the two. Because of the Category I and Deemed to be status, it was possible for ICT to go out of Maharashtra. In view of massive investment in energy, petrochemicals, chemicals, polymers, textiles, minerals, materials, biotechnology, pharmaceutical, and food industries in Odisha, ICT was requested to open a campus in Bhubaneswar. Indian Oil Corporation Ltd took a historic decision to support fully a campus of ICT in Bhubaneswar. This is the first of its kind in India where a corporate house has decided to support innovative education and research under its CSR policy to create manpower and job opportunities and entrepreneurs and skill development Centres in Eastern India. The nation at large will benefit.

The campus is equipped with modern equipment for carrying out high class research and innovation at Centres of Excellence to develop technology and to support Research & Development in industry and Skill Development in Chemical Engineering, Petrochemicals, Textiles, Polymers, Pharmaceuticals, Energy, Food Technology, etc.

6.2 INTEGRATED M. Tech. IN CHEMICAL ENGINEERING

(i-M.Tech.)

i-M. Tech. is unique in its content, character, delivery, and outcome. It is new and being introduced in India for the first time. The objective to impart industrial training of two years to all students in different areas and develop entrepreneurial skills. CREATING ENTREPRENEURS AND INNOVATORS instead of job seekers is a prime goal. A variety of opportunities are provided to both students and teachers. During the industrial internship the student will receive stipend/or concessions from industry making the education affordable to one and all.

i-M.Tech. starts after completion of 12th Standard (HSSC, 10+ 2, or equivalent) and is of 5 years duration consisting of 15 trimesters (6 trimesters in industry and 9 in classroom on campus) with alternate term in industry, with major degree in Chemical Engineering and minor in 6 different disciplines. It will ensure improved quality and industry-relevance in curricula development for integrated M. Tech. in the field of Chemical Engineering as major branch with minor in Petrochemicals, Textiles, Polymers and Materials, Foods and Pharmaceuticals, and Energy Engineering. The last two trimesters will be for promotion of research problem with experiments which will lead to a design project to promote entrepreneurship and start-up companies. An experience of 2 years in different industries will boost the morale of students, their industry-readiness and placement prospects. Our idea is to place them in all processing industries including software companies, programming, electronics industries, minerals, coal, biotech, etc.

6.2.1 INTAKE CAPACITY

The admission to this course is based on JEE (Mains) and intake capacity is 60.

As stated earlier the programme is a trimester (4-month) system with 3 terms per year. The first trimester in an academic year will begin with class room teaching and receive training in high level instruments in the fields of Chemistry and Physics, and Mathematics. The syllabus of Chemistry and Physics is so designed as to make the students useful for taking adequate training for industrial internship. The instrumental methods will include theory and experiment on instrumental methods of analysis, typically taught at M.Sc. level and in Mathematics, they will learn MATLAB, Python, C++, R-programming, CAD/CAM. The first term will make them understand the importance of various industries.

Table 6.1: Tentative Schedule of Lecture and Work Terms

Year	Trimester	Scheme of trimesters	Starting month
1	T1	Theory	September
1	T2	Theory	January
1	T3	In-plant	May
2	T4	Theory	September
2	T5	In-plant	January
2	T6	Theory	May
3	T7	In-plant	September
3	T8	Theory	January
3	T9	In-plant	May
4	T10	Theory	September
4	T11	In-plant	January
4	T12	Theory	May
5	T13	In-plant	September
5	T14	Theory	January
5	T15	Theory	May

During T14 and T15 the students will study courses on management, finance, environmental laws, legal issues, entrepreneurship and sustainability and work on a group project called Start-Up Project.

6.2.2 MAJOR AND MINOR (I-M.TECH.) PROGRAMME

100% seats are for students admitted through JoSAA as per seat matrix provided at JOSAA portal for ICTM-IOC Bhubaneswar. <https://josaa.nic.in/>

1. Chemical Engineering (Major)
Polymer and Materials Engineering (Minor)
2. Chemical Engineering (Major)
Food Engineering and Technology (Minor)
3. Chemical Engineering (Major)
Pharmaceutical Technology (Minor)
4. Chemical Engineering (Major)
Fibre and Textile Processing Technology (Minor)
5. Chemical Engineering (Major)
Energy Engineering (Minor)
6. Chemical Engineering (Major)
Petrochemical Engineering (Minor)

6.2.3 EXAMINATION PATTERN

The examination pattern is 50% marks for continuous evaluation and 50% weightage will be for the end-trimester examination.

6.2.4 INDUSTRIES FOR INTERNSHIP

The students of ICTM-IOC Bhubaneswar campus have been given internships in the following industries and this list will go on increasing to include industries across the country as well as abroad in future.

Biofermenta Dahej and Kulu	IOC Gujarat Refinery
Gujarat Refinery Baroda	IMMT Bhubaneshwar
IOC Panipat Refinery	IOC Paradip Refinery
IOC R&D Faridabad	Jagannath Polymers Cuttack
Microfilt Umbergaon	Microfilt Umbergaon
NALCO	Oriplast Balasore Odisha
Paradeep Phosphate	RINL Vizag steel
Galaxy Surfactants Ltd.	UPL Ltd
Godrej Industries Ltd.	Indo Amines Ltd.
Atul Ltd.	Anupam Colours Pvt. Ltd.
Rubicon Research Pvt. Ltd.	Aarvi Encon Pvt. Ltd.
Gujrat Narmada Chemicals Ltd.	Microchem Laboratory Pvt. Ltd.
Reliance Industries Ltd.	Alkyl Amines Chemicals
Aarti Drugs Ltd.	Aarti Industries Ltd.
Pidilite Industries Ltd.	IIP Dehradun
Adani Group	BPCL
Dalmia Group Cement	GAIL
HPCL	IFFCO
BEML	DRDO
Deohler	BHEL
MAPRO	HAL Nashik
GreenShift Energy Pvt Ltd	Concept Pharmaceuticals Ltd
University of Calgary	University of British Columbia
University of Alberta	McMaster University
McGill University	National University of Singapore

Additional Industries which will take interns during 3rd and 4th Trimesters apart from the above.

Adani Group	BPCL
Dalmia Group Cement	GAIL
HPCL	IFFCO
OPAL Dahej	

This list is not exhaustive and will continue to grow. Very interestingly the industries have liked the Internship Diary prepared by ICT to monitor the student's Progress and some of the students are already assigned research-oriented assignments, literature search and report writing. The acceptance of the young students has been enthusiastic and speaks volumes about the quality and content of the i-M. Tech. programme.

6.2.5 MINOR DEGREE COMPONENT

The award of the minor degree will be decided at the end of the programme depending on the number of credits the student has acquired. It will not be decided in the beginning and thus the student will have a chance of learning lessons from different disciplines and developing interest. This is again a unique feature.

6.2.6 VIBRANT SYLLABUS

Since the students will be going to industry, they will have to write reports and credits are given to the student for industrial internship. After the 4th trimester, the students can suggest which new topics should be included in the syllabus in tune with the demands of the industry.

6.3 EXECUTIVE M. Tech. (e-M.Tech.) FOR INDUSTRIAL PERSONNEL

Executive MBA programmes are run working for professionals by various management institutes which typically cater to management of business, finance, and administration. This programme is distinctly different from them. The idea behind launching this programme is to train executives having at least three years industrial experience with managerial experience or responsibilities who could rise to the top to become vice presidents, presidents, managing directors and the like but with training and research in technical field in an industrial set up.

6.3.1 TYPES OF INDUSTRIES

All processing industries where rate processes of physical, chemical, or biological or combinations thereof are involved. Practically all industries are covered. For instance, oil, coal, refinery, coal, petrochemicals, minerals, materials, energy, pharmaceuticals, textiles, polymers, plastics, paints, oleo chemicals, agrochemicals, dyes, fertilizers, surfactants, biochemicals, biotechnology, foods, electronics, etc.

The e-M.Tech. is thus geared at giving training in research, innovation industrial practices, law, sustainability and management to experienced and senior professionals who want to continue to work without losing continuity in the workplace but still being a student while pursuing a degree. There is a subtle difference in this program in comparison with other programs. These executives are many times involved in issues related to research, innovation, business expansion, environment, law and human resources, plant operation, design and development, marketing. In many PSUs, it is found that some are transferred to R and D or plant operations, without having any idea of the field resulting into considerable loss of time and resources.

6.3.2 STUDY PATTERN

They will study in the classroom on the campus for a short term of 4 weeks during which s/ he will undergo course work in two subjects as well as start do literature search and plan for research. The student will continue to carry out the research activities in the parent industry during alternate terms. During the parent industry term (PIT), s/he will continue her/his research work, home assignments, and other related course work. The student is continuously monitored and participates in classroom discussions, home assignments and research project. The e-M. Tech. student is also supposed to mentor one-two students from the Integrated Master's degree students during their industrial internship. The syllabus is prepared in consultation with faculty from ICT and IIT-Kharagpur. The programme is of two years duration.

6.3.3 COLLABORATION WITH IIT KHARAGPUR FOR E-M.TECH.

IIT Kharagpur has signed an MOU for joining hands in the e-M.Tech. and research programmes allowing ICT to use its Extension Centre near Hotel Swosti Premium, Bhubaneswar. The e-M. Tech. programme has another interesting aspect. It is being conducted jointly in collaboration with IIT-Kharagpur from June 2019. The syllabus for the e-M.Tech. Program has been prepared and approved by the concerned academic bodies of both the institutes. Subjects such as industrial law, sustainability and process safety and hazard management along with research topic will also be covered. The students will be thus able to spend time on ICT Mumbai IOC Bhubaneswar as well as IIT-KGP campus. There will be two guides for the students in certain cases to co-guide for the students, one from each campus. The facilities for research will be shared.

6.3.4 RELEVANT COURSES FOR EXECUTIVES

Some of the optional/additional courses including are as follows:

- Artificial Intelligence and Machine Learning for Chemical Industry
- Chemical Safety and Risk Management
- Corporate Sustainability
- Engineering and Law

- Environment Protection and Law
- Environmental laws
- Environmental Science and Sustainability
- Ethics and Industrial Practices
- Experimental Design
- Finance and Profit Management
- Green Chemistry and Engineering
- Industrial and Labour Laws in India
- Industrial Management
- Intellectual Property Rights, Valuation and Management
- Materials Management
- Operations Research
- Perspective of Global Industry
- Research and Innovation Methodology
- Research Methodology
- Sustainability

Thesis work, seminar, critical analysis of given topic, electives specific to industry of the candidate.

6.4 TWO YEAR REGULAR MASTERS DEGREE IN ENGINEERING AND TECHNOLOGY AND BASIC SCIENCE

This regular PG degree programme will be extended to all campuses and students distributed internally “if required” taking into account the expertise of faculty and against the sanctioned total strength on the Main Campus.

Master’s Degree (Full time, 2 years) Programmes at ICT Bhubneshwar Campus

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
1	M.Tech. (Food Engineering and Technology)	18	B.E/B.Tech/B.Sc(Tech) in Food Engineering and Technology/ Food Engineering/Food Technolgy/Food Science/ Food Process Engineering .
2	M.Tech. (Pharmaceutical Technology)	18	B.Sc.(Tech) in Pharmaceuticals and fine chemicals /B.Tech in Pharmaceutical Chemistry and Technology / B.Pharm or equivalent B.Tech with pharmacy background only.
3	M.Tech. (Petrochemical Technology)	18	B.Chem.Engg. or B.E. / B.Tech. in Chemical Engineering/Chemical Technology/Petroleum Engineering ,B.Tech. (Polymer Engineering and Technology, B.E. (Polymer Engg. / Plastic Engg.), B.E. (Petrochemical Engineering/ Technology).
4	M.Sc. (Chemistry)	30	B. Sc. with Chemistry as major subject and Mathematics at H.S.C Level or equivalent

6.5 Ph.D. PROGRAMMES

The 25 Ph.D. programmes in various engineering and technology disciplines including basic sciences which are offered at ICTM-IOCB campus.

COURSES OFFERED

Table 6.2: Different Specializations for Ph.D. Programmes

Sr. No.	Degree	Specialization
1	Ph. D. (Tech.)	Agrochemical Engineering
2		Bioprocess Technology
3		Chemical Engineering
4		Speciality Chemical Technology
5		Energy Engineering
6		Fibres and Textile Processing Technology
7		Food Biotechnology
8		Food Engineering and Technology
9		Green Technology
10		Lipid Engineering
11		Petrochemical Engineering
12		Pharmaceutical Technology
13		Pharmaceutical Chemistry
14		Plastics Engineering
15		Polymer and Materials Engineering
16		Surface Coating Technology
17		Electrical Engineering
18		Electronics Engineering
19	Ph.D. (Sci.)	Biochemistry
20		Biotechnology
21		Chemistry
22		Food Science
23		Mathematics
24		Physics
25		Textile Chemistry

All Ph. D. programs are now redesigned with course work as per UGC regulations.

6.6 CENTRE OF EXCELLENCE IN RESEARCH AND INNOVATION

Some Centres of Excellence will be established in a phase wise manner in different areas relevant to the region, nationally and internationally niche areas. Currently we have acquired high end characterization equipment to conduct research in all fields of science and technology.

Few of high end equipments have been located in Odisha University of Research and Technology campus (CET then) Bhubaneswar and majority of high-end equipment in the vicinity of our current campus in Bhubaneswar.

6.7 ADMISSION PROCEDURE**6.7.1 ADMISSION TO FIRST YEAR OF INTEGRATED M.Tech. PROGRAM IN FOLLOWING COURSES**

Admission for the academic year 2023-24 to Integrated M. Tech., Chemical Engineering (5 years, Integrated Masters in Technology after XIIth standard) programme offered at

Institute of Chemical Technology, Mumbai: Indian Oil Odisha Campus, Bhubaneswar will be conducted by JoSAA/CSAB 2023. <https://josaa.nic.in/>

6.7.1.1 APPLICATION PROCEDURE FOR i-M.Tech.

The admission to integrated M. Tech programme at Institute of Chemical Technology, Mumbai: Indian Oil Odisha Campus, Bhubaneswar will be purely based on the merit list generated from JEE Main-2023 and the counseling shall be done by JoSAA/CSAB 2023. The eligibility criteria for admission to iMTech program shall be as per the guidelines of JoSAA/CSAB 2023. <https://josaa.nic.in/>

6.7.1.2 ELIGIBILITY CRITERIA AND INTAKE CAPACITY OF i-M.Tech.

HSC passed candidate or its equivalent examination with Physics, Chemistry and Mathematics as compulsory subjects along with valid JEE Main Score is eligible for application to this course through JoSAA counselling. The intake capacity for this course is 60.

Reservation:

As per Government of India rules, candidates belonging to certain categories are admitted to seats reserved as per seat matrix provided for ICTM-IOC Bhubaneswar at JoSAA portal. Benefit of reservation for admission to ICTM-IOCB shall be given only to those classes/castes/tribes which are in the respective central list published by the GoI.

6.7.1.3 PROGRAMME STRUCTURE FOR i-M.Tech.

(Refer Section 6.2)

6.7.1.4 ADMISSION FEES:

PROGRAMME FEES PRESCRIBED FOR INTEGRATED MTECH:

The candidates to be admitted for iMTech course during 2023-24 are required to pay fees as prescribed by the institute. The institutional fees to be paid by all the admitted candidates are as follows:

Sr.	Type of Fees	Open And All Reserve Category Students Fee For 1 st Year (₹)
1.	Library Deposit	Rs. 5,000/-
2.	Fees	Rs. 90,100/-
	Total	Rs. 95,100/-**

**Note: contingency amount for students admitted under various fellowships will be as per the norms of respective sponsoring funding agencies. Research contingency of Rs. 12,000/- will be added in the fifth year of fees. Admission fees may vary and it will be informed at the time of admission.

6.7.2 ADMISSION TO TWO YEAR M.Tech. AND M.Sc. PROGRAMME

PROGRAMMES OF STUDIES, ADMISSION CRITERIA AND CAPACITY

- All Masters programmes enlisted under section 6.4 are full-time programmes of 2 years duration.
- All M. Tech. Programmes are partly by papers (two semesters) and partly by thesis (two semesters) with fellowship for students who have valid GATE Examination scores.
- All M. Sc. Programmes are two-year programmes (four semesters) only by papers. No fellowships are available to any of the M. Sc. (by papers) Programmes.
- For eligibility, the candidate should have passed any one of the Bachelor's degree as mentioned in required qualification for that respective programme mentioned under section 6.4. The candidate should have passed Bachelor's degree from ICT or any equivalent examination of a post HSC/HSSC four-year degree programme of IIT/NIT or any university/institute recognized by UGC/AICTE. **For all the Postgraduate Programmes as listed in section 6.4, the candidate should have passed required bachelor's degree with 60% marks in aggregate or equivalent CGPA. (55% marks in aggregate or equivalent CGPA for the backward class candidates)**
- Any other equivalent degree of full four-year duration for that respective programme will be considered subject to the clearance from the equivalence recognition committee of Institute of Chemical Technology.

6. The selection for the AICTE fellowship shall be based on valid GATE score.
7. Reservation policy will be applicable as per the government norms.
8. Candidates are requested to refer section 3.3.3 for details of admission criteria.

Application Procedure for Master's Programmes

Candidates are requested to refer section 3.3.4 for details regarding application procedure for all masters programme at ICTM-IOC Bhubaneswar

Programme Fees Prescribed for Two Year M. Tech.:

The candidates to be admitted for two-year MTech course during 2023-24 are required to pay fees as prescribed by institute. The institutional fees to be paid by all the admitted candidates are as follows:

Sr.	Type of Fees	Open And All Reserve Category Students Fee For 1st Year (₹)
1.	Library Deposit	Rs. 5,000/-
2.	Fees	Rs. 87,000/-
	Total	Rs. 92000/-

Second Year Fees: Rs. 1,00,000/-

Note: Admission fees may vary and it will be informed at the time of admission.

Programme Fees Prescribed for Two Year MSc.:

Sr.	Type of Fees	Open And All Reserve Category Students Fee For 1st Year (₹)
1.	Library Deposit	Rs. 5,000/-
2.	Fees	Rs. 65,000/-
	Total	Rs. 70,000/-

Second Year Fees: Rs. 76,500/-

6.7.3 EXECUTIVE MASTERS DEGREE PROGRAMMES

6.7.3.1 APPLICATION PROCEDURE

Admission to eMTech program at ICTM-IOCB Campus will be conducted by the Institute of Chemical Technology, Mumbai Campus.

FOR ONLINE ADMISSION FORM VISIT <http://www.ictmumbai.edu.in>

6.7.3.2 ELIGIBILITY CRITERIA FOR THE ADMISSION TO e-M.Tech.

1. The candidate should have passed bachelor's degree in any branch of Engineering or Technology or Master's degree in any branch of Science. Initially only a certain branch of engineering, particularly Chemical Engineering or equivalent degrees, and technology will be considered depending upon the type of industry.

(a) Eligibility, Admission procedure and Results

Eligibility

- Only Industry sponsored candidates with minimum three years of industrial experience
- B.Tech./BE in Chemical Engineering/Chemical Technology/Polymer Engineering/Petroleum Engineering/Biotechnology/Food Technology/Environmental Engineering/Equivalent of 4 yr B. Tech./M.Sc. in Chemistry, Physics, Bio-Sciences
- Minimum 60%, or 6.5 CGPA in a 10-point scale in the qualifying examination. If the CGPA is on a different scale, eligibility shall be calculated corresponding to the equivalence of above.

The prospective candidate shall have to clear a test and/or an interview by a committee that may be formed from time to time.

2. This course is meant only for recognized industry sponsored candidates.

3. The candidate should be full time industrial/ R and D employee with at least three years experience in a chemical or allied industry.
4. All processing industries where rate processes of physical, chemical, or biological or combinations thereof are involved. Practically all industries are covered. For instance, oil, coal, refinery, coal, petrochemicals, minerals, materials, energy, pharmaceuticals, textiles, polymers, plastics, paints, oleo chemicals, agrochemicals, dyes, fertilizers, surfactants, biochemicals, biotechnology, foods, electronics etc. Kindly note expertise exists in all areas for teaching and research.
5. The industry should undertake the responsibility of releasing the candidate for course work (Theory Classes), experimental work (Laboratory work) or discussions with the concerned research guide from time to time. A proper timetable should be prepared by the concerned teacher and his supervisor, which will be approved by the Head of Department/ Centre Director.
6. A bond in this regard should be signed and approved by the Dean (Academic Programmes) or Director of the Concerned Campus in consultation with the Dean. The Institute is not responsible for the internal mechanism of the concerned industry for selection of the candidates of this program.
7. This is a two-year full-time programme where the student has the privilege of working in his own parent industry on a research problem supervised by two supervisors from ICT Mumbai (from all three campuses) and IIT Kharagpur. One of the ideas is also to mentor, if possible, the interns of the Integrated M. Tech. degree students during their work term in their industry. The research project is decided in the very first month of admission.

6.7.3.3 COLLABORATION WITH INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR

The e-M. Tech. programme has another interesting aspect. It is being conducted jointly in collaboration with IIT-Kharagpur from June 2019. The syllabus for the MTech Program has been prepared and approved by the concerned academic bodies of both the institutes. Subjects such as industrial law, sustainability and process safety and hazard management along with research topic will also be covered. The capacity for this joint degree program is 60 in which the general category students it is 30. The students will be thus able to spend time on ICT Mumbai IOC Bhubaneswar as well as IIT-KGP campus. There will be two guides for the students in certain cases to co-guide for the students, one from each campus. The facilities for research will be shared.

6.7.3.4 e-M.Tech. PROGRAMME DELIVERANCE FEATURES

- Two-year programme comprising of 8 quarters
- Each quarter: 3 months
- On campus classroom teaching: 2 courses during first 4 weeks of quarters 1-6
- Remaining period of quarter in parent organization when the student performs research work, home assignments and other related course work assignments
- Classes at IIT Kharagpur preferably in the quarter covering the summer vacation of the Institute
- Classes at ICT in remaining quarters where IIT faculty to co-teach with ICT faculty members - weekend contacts / NKN /video recording with weekend contacts.
- Quarter 7 and 8 – project work of 12 credits in each quarter
- Project work - in either of the two Institutes/Parent Industry/Recognized Laboratories/Industry approved by the Institutes
- Project work supervision by at least one faculty member from either Institute
- In Q1-6, continuous evaluation system - class room discussions, class tests/quizzes, home assignments, presentations, group or individual projects and mid semester examination of 70% weightage and end quarter examination of 30% weightage
- Mid quarter examination per quarter – to be conducted within class room session and end term examination at the end of each quarter (in the weekend proceeding the next quarter)
- End of quarter examinations of 2-hour duration for 3 credit subject and 3 hour duration for 4 credit subject

- Appearing and passing in end quarter examination mandatory for completing a quarter
- Minimum credit requirement for degree – 88

6.7.3.5 ADMISSION FEES

The institutional fees to be paid by all the admitted candidates are as follows:

Sr. No.	Type of Fees	Nonrefundable Fee for entire course (Rs.)
1.	Library Deposit	Rs. 5,000/-
2.	Fees (2 years)	Rs. 16,00,000/- (Fees 7.5 Lakh per year + 1 Lakh Accommodation per Year)
	TOTAL	Rs. 16,05,000/-*

* The total fee to be paid at the time of admission.

* One time Nonrefundable in case of admission cancellation.

6.7.4 DOCTOR OF PHILOSOPHY (Ph.D.) PROGRAMMES

6.7.4.1 APPLICATION PROCEDURE

Admissions to PhD Programmes at ICTM-IOC Bhubaneswar are conducted by the Institute of Chemical Technology, Mumbai Campus.

FOR ONLINE ADMISSION FORM VISIT <http://www.ictmumbai.edu.in>. Candidates are requested to refer section 3.4.4 for details of admission to PhD programme.

6.7.4.2 INTAKE CAPACITY:

There is no prescribed intake capacity for any of the Doctoral courses/ branches since the number of available fellowships and the requirement by the research supervisors varies every year. Several research projects, either funded by various government agencies or private industries, have provisions for fellowships. No admission to a Ph.D. course is done without fellowship, although the amounts vary depending on the source of funding and the candidate's qualifications.

6.7.4.3 INSPIRE FELLOWSHIP FROM DEPARTMENT OF SCIENCE AND TECHNOLOGY, GOVT. OF INDIA

First Rank holders in masters degree in Engineering/Technology/Pharmacy/Science of any UGC/AICTE recognized Indian University or Institute/Statutory Body in India can apply for award of INSPIRE FELLOWSHIP, a scheme of the Government of India to avail research grants for a period of five years for doing research leading to Ph.D. degree. Application format and necessary documents for application are available on the website www.inspire-dstgov.in. Eligible candidates should apply directly to DST and after getting provisional acceptance, they may be considered for admission at ICT, subject to fulfillment of other criteria.

6.7.4.4 AICTE NATIONAL DOCTORAL FELLOWSHIP (NDF) SCHEME :

AICTE offers PhD fellowships of Rs 28000 per month plus HRA in a few selected institutes including ICT in all branches of engineering and technology as well as pharmacy. AICTE QIP will also include ICT for faculty members desirous of enrolling for doctoral degrees. Watch for their advertisement.

Visit the following two websites.

<http://www.aicte-india.org/content/national-doctoral-fellowship-ndf>

6.7.4.5 UGC/CSIR FELLOWSHIPS

Candidates are requested to visit the websites of these bodies for details of fellowships available with them under different criteria. All PhD students admitted to any branch in ICT must receive fellowship from some funding agency or industry or collaborative programmes or exchange scheme. No full time student is admitted to the Ph.D. programme without full fellowship.

6.7.4.6 ELIGIBILITY CRITERIA FOR ADMISSION TO Ph.D. (Tech.)/ Ph.D. (Sci.)

For Ph.D. (Tech.) course at Sr. No. 1, 3, 5 and 11 in Table 6.2, the candidate must have passed the Master's degree examination in the Agrochemical Engineering / Chemical Engineering / Chemical Technology (any branch at ICT)/ Pharmacy/ Plastic Engineering of ICT/ [(M.E in Petrochemical Engineering/ Environmental Engineering) (Provided Bachelor Degree in Chemical Engineering)] or any other UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For PhD (Tech.) course at Sr. No. 2 in Table 6.2 must have passed Master's degree examination in the Chemical Engineering/Bioprocess Technology/ Chemical Technology (any branch at ICT)/ Pharmacy/M. Tech. Biotechnology/Biochemical Engineering/ or any other UGC recognized university as equivalent there to with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For Ph.D. (Tech.) courses at Sr. No. 4, 6, 9, 10, 12, 13, 14, 15 and 16 in Table 6.2, the candidate must have passed the Master's degree examination in the Chemical Engineering / Chemical Technology (any branch at ICT)/ Pharmacy/ Plastic Engineering of ICT or any other UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For Ph.D. (Tech.) courses at Sr. No. 17-18 in Table 6.2, the candidate must have passed the Master's degree examination in Electrical / Power systems / Control systems / Instrumentation from any UGC recognized university as equivalent thereto with 60% marks or equivalent CGPS (55% marks or equivalent CGPA in case of reserved category).

For Ph.D. (Tech.) course at Sr. No. 7 in Table 6.2 must have passed the Master's degree in Food Engineering and Technology / Food Technology/ Biotechnology/ Food Biotechnology/ Food and Biochemical Engineering/ Chemical Technology (any branch at ICT)/ Chemical Engineering of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA 55% marks or equivalent CGPA in case of reserved category.

For Ph.D. (Tech.) course at Sr. No. 8 in Table 6.2 must have passed the Master's degree in Food Engineering / Food Technology/ Food and Biochemical Engineering/ Chemical Technology (any branch at ICT)/ Chemical Engineering of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA 55% marks or equivalent CGPA in case of reserved category.

For Ph.D. (Sci.) courses at Sr. No. 19 and 20 in table 6.2, the candidate must have passed the Master's degree examination in any biological faculty of science of any university recognized by UGC with minimum of 55% marks or equivalent CGPA (50% MARKS OR EQUIVALENT CGPA in case of reserved category).

For Ph.D. (Sci.) courses at Sr. No. 21, 23 and 24 in Table 6.2, the candidate must have passed the Master's degree examination in the respective Subject of any University recognized by UGC with minimum of 55% marks or equivalent CGPA (50% marks or equivalent CGPA in case of reserved category).

For Ph.D. (Sci.) course at Sr. No. 22 in Table 6.2, in Food Science the candidate must have passed the M. Sc examination in Food Science, Food Processing, Nutrition, Home Science, Post harvest Technology, Horticulture, Dairy Science, Biochemistry, Microbiology, Organic Chemistry of any UGC recognized University as equivalent thereto with 60% marks or equivalent CGPA (55% marks or equivalent CGPA in case of reserved category).

For Ph.D. (Sci.) course at Sr. No. 25 in Table 6.2, in Textile Chemistry, the candidate must have passed the M. Sc. examination in Textile Chemistry/ Textile Clothing/ Life Sciences/ Biochemistry/ Microbiology/ Chemistry of ICT or of any University recognized by UGC with minimum of 55% marks or equivalent CGPA (50 % marks or equivalent CGPA in case of reserved category).

Further, candidates from any of these streams must clear the written test of the institute which are based on the syllabus.

The candidates who have passed the Master's degree by Research of any University recognized by

UGC may be considered for admission only if they hold fellowship from any recognized funding agency.

The candidates qualified in NET/ GATE/ CSIR/ DBT/ - JRF examinations or other equivalent examinations and holding valid fellowship will be preferred.

Apart from regular full time on- campus candidates, following candidates are also eligible for admission to Ph.D. (Tech.)/ Ph.D. (Sci.):

- (i) Permanent full time teachers of College/ Institute
- (ii) Employees of National laboratories/ Government Institutions
- (iii) Employees of Industry

However, persons qualified in NET/ CSIR/ DBT-JRF and holding valid fellowship obtained from Government funding agencies such as DST, ICMR, UGC, CSIR, etc. are exempted from the entrance written Test. Admissions to such candidates are open throughout the academic year.

6.7.4.6.1 ELIGIBILITY CRITERIA FOR TEACHERS FOR ADMISSION TO Ph. D. (Tech.) / Ph. D. (Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.3.3.1. above.

- a) The candidate should be a permanent teacher having full time teaching experience of at least two years in Degree College or five years in Junior college / Diploma College / Polytechnics (affiliated to statutory bodies).
- b) Teachers who have been in the service of any Engineering and Technology College approved by the UGC/AICTE are entitled for registration for Ph. D. (Tech.) with the faculty of the ICT.
- c) Teachers who have been in the service of any Science College approved by the UGC are entitled for registration for Ph. D. (Sci.) with the faculty of the ICT.
- d) The college management should undertake the responsibility of releasing the candidate for course work, experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned teacher and his supervisor, which will be approved by the Head of Department/ Centre Co-ordinator. A bond in this regard should be signed and approved by the Vice Chancellor, ICT.
- e) Teachers can work in the ICT laboratories during vacations and holidays and after their office hours if they come from colleges in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Head of Department/ Centre Co-ordinator.
- f) A maximum period of 5 years extendable by 1 year will be allowed in case of teachers who carry out research part time but put in at least 3 months full time work in a year in the ICT labs. In such cases, part of the experimental work could be allowed to be done in their premises for which their management will provide them with necessary facilities. The characterization and other sophisticated analysis must be done in ICT. Exclusive theoretical work should be discouraged as much as possible to give the teachers a hands-on experience and to bring them into an environment of research. However, this will be left to the individual supervisor's discretion, who should take abundant precaution to avoid unethical practices.
- g) The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in peer reviewed international journals. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.
- h) Teachers registering themselves as Ph.D. student of ICT should not register any Masters students with themselves in his/her own college to avoid research by proxy. The candidate

as well as his/her supervisor must give an undertaking, with a counter signature of the concerned principal to this effect to avoid degeneration of this novel concept into a Ph.D. by unscrupulous means.

- i) If the teacher intends to join the ICT on leave without pay for a period of three years, then the candidate may be eligible for the UGC fellowship under our SAP programme, provided he/ she successfully clears the Institutional entrance tests.
- j) All regular admissions criteria are applicable to these candidates and they must also do the course work required for Ph.D. programme.

6.7.4.6.2 ELIGIBILITY CRITERIA FOR CANDIDATES WORKING IN NATIONAL LABORATORIES/ GOVERNMENT INSTITUTIONS FOR ADMISSION TO Ph.D.(Tech.) / Ph.D.(Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.3.3.1. above.

- a) The candidate should be a permanent employee working in National Laboratories/ Government Institutions having minimum 2 years of service.
- b) The management of the organisation should undertake the responsibility of releasing the candidate for course work, experimental work or discussions with the concerned research guide from time to time. A proper time table should be prepared by the concerned candidate and his supervisor, which will be approved by the Head of Department/ Centre Co-ordinator. A bond in this regard should be signed and approved by the Vice Chancellor, ICT.
- c) Such candidates can work in the ICT laboratories during holidays and after their office hours if they come from organisation in the city or nearby. They must indicate on which date they will avail of the research facilities in ICT. A proper log book must be maintained by the candidate duly signed by his supervisor which will be authenticated by the Head of Department/ Centre Co-ordinator.
- d) The registered candidates will be required to publish or patent some part of their work within two years of the registration otherwise this registration will not be continued. The publication must be done in peer reviewed international journals. Multi-authored papers without much input from the teacher should be avoided. Conference proceedings which are not peer reviewed will not be considered as publications.
- e) All regular admissions criteria are applicable to these candidates and they must also do the course work required for Doctoral programme.

6.7.4.6.3 ADMISSION FOR INDUSTRY -SPONSORED IN-HOUSE CANDIDATES TO Ph.D. (Tech.) / Ph.D. (Sci.)

Following are the requirements in addition to the criteria mentioned under heading 3.3.3.1. above.

1. The candidate should have minimum 2 years of industrial experience.
2. Industry should have a well-equipped Research and Development and Quality Control laboratory with at least one Ph.D. employee working in the set up in the relevant area.
3. Industry is required to get recognition from ICT by the following procedure:
 - i. After receiving request from an industry, a Committee appointed by the Vice Chancellor, ICT will make a visit to the industry laboratory. The ICT appointed Committee will consist of Dean (RCRM) as Chairman with a Professor nominated by the Vice Chancellor and the Head of the Department in the area of proposed research.
 - ii. The committee will evaluate the activities and the competence of the R and D of industry following the guidelines of similar to those proposed by DSIR. All the expenses in connection with the visit will be borne by the industry concerned.

The ICT committee will make recommendations to the Vice Chancellor, ICT for approval. The industry R and D will be recognized by the approval of the Vice Chancellor, ICT. In case the laboratory is already recognized by DSIR, the visit by ICT committee will not be necessary.

- iii. Once the R and D laboratory is recognized by the ICT, the industry is required to pay Rs. 5 lakhs for first four years (typical duration of Ph.D. work) and necessary contingency amount of Rs. 50,000/-per candidate per year (in the name of ICT, to be utilized by the Research Guide) for the conduction of the research activity. After four years, the renewal of the recognition will continue by payment of Rs. 1 lakh per year. Further, the industry should try to get recognition for their R and D set up from DSIR, based on the recommendation of the ICT appointed Committee.
4. During a year, an industry may nominate up to two employees (with required qualification) for registering for the doctoral degree at ICT under the supervision of ICT faculty.
5. The candidate is required to pay all the Ph.D. fees (over and above laboratory eligibility fees) as proposed by the ICT at appropriate time and will not be eligible for any fellowship. Also, the other requirements, like eligibility criteria, qualifying institutional tests, completion of course work, etc. need to be fulfilled by the industry candidate.

6.7.4.7 ADMISSION FEES

The candidates admitted to PhD programme for AY 2023-24 are required to pay fees as prescribed by the institute. The institutional fees to be paid by all the admitted candidates are as follows:

Ph.D. (Tech.)/ Ph.D. (Sci.)

Sr. No.	Type of Fees	Open and All reserve category students Fee for 1 st Year (Rs.)
1.	Library Deposit	Rs. 5,000/-
2.	Fees	Rs. 90,000/-
	TOTAL	Rs. 95,000/-

Fees: Second Year Onwards: Rs. 1,03,00/- p. a.

6.7.4.8 EXAMINATION PATTERN

Please refer ICT, Mumbai campus for Examination Pattern given in section 3.4.

6.7.5 TENTATIVE ACADEMIC CALENDER 2023-24

The following shall be the tentative academic calendar:

A) INTEGRATED MTech COURSE

TRIMESTER 1: September 01, 2023 to December 30, 2023

TRIMESTER 2: January 02, 2024 to April 28, 2024

TRIMESTER 3: May 01, 2024 to August 31, 2024

Note – The above-mentioned dates are tentative and likely to change based on admission round. The integrated master program is TRIMESTER pattern. Each trimester is of four months duration.

B) REGULAR MTech/MSc COURSES

SEMESTER 1: July 03, 2023 to December 15, 2023

SEMESTER 2: January 02, 2024 to June 28, 2024

Note – the above-mentioned dates are tentative and likely to change based on admission round.

C) DOCTORAL COURSES

Academic Year: July, 2023 to June, 2024

Note – the above-mentioned dates are tentative and likely to change based on admission round.

6.7.6 REQUIREMENT OF ATTENDANCE

Please refer ICT, Mumbai campus for attendance rule.

6.7.7 IDENTITY CARD

At the beginning of each academic year, a regular bonafide student is issued a smart Identity Card with his/ her latest photograph printed it, on payment of the necessary charges. The students must wear the I-card while on campus. I-card is also necessary for appearing at all tests and examinations. If a student leaves the course halfway, after taking admission, he/she must surrender the I-Card in the Academic office.

6.7.8 WORKING HOURS

- (a) Academic Timings: The academic working hours of the institute are between 8.30 a.m. to 5.30 p.m., with lunch break from 12.35 to 1.30 p.m.
- (b) Office Hours: 9.30 a.m. to 5.30 p.m., with lunch break from 1.15 to 1.45 p.m. - on all working days.

The office will remain closed on second and fourth Saturdays of a month, in addition to Sundays and public holidays

6.7.9 GENERAL

The medium of instruction for all courses is English.

Physical fitness: The Vice Chancellor at his discretion may refer any candidate to the appropriate medical authority for ascertaining the physical fitness of the candidate to undergo the requirements of the course.

The report of medical authority and the action taken by the Vice Chancellor shall be submitted to the Regional Head of Technical Education for information. It is to be noted that physically handicapped candidates are not provided with any additional facilities as far as the academic activities pertaining to the course is concerned.

The Vice Chancellor may verify the antecedents of any candidate through the appropriate police authority.

The report received from police authority and the action taken by the Vice Chancellor shall be submitted to the Regional Head of Technical Education for information.

Notwithstanding anything contained in these Rules, if the Govt. / Institute takes any policy decision pertaining to first year admissions, the same shall be brought in to effect at that point of time.

6.7.10 CONDUCT AND DISCIPLINE FOR ALL STUDENTS:

Students while studying at ICT, if found indulging in any anti-national activity contrary to the provisions of Acts and Laws enforced by Government or in any activity contrary to Rules of discipline, will be liable to be expelled from the Institute without any notice by the Vice Chancellor of the Institute.

Action against ragging: Maharashtra Prohibition of Ragging Act 1999 which is in effect from 15th May 1999 has the following provisions for Action against Ragging.

- a) Ragging within or outside of any educational institution is prohibited,
- b) Whosoever directly or indirectly commits, participates in, or propagates ragging within or outside any educational institution shall, on conviction, be punished with imprisonment for a term up to 2 years and/ or penalty, which may extend to ten thousand rupees.
- c) Any student convicted of an offence of ragging shall be dismissed from the educational institution and such student shall not be admitted in any other educational institution for a period of five years from the date of order of such dismissal.
- d) Whenever any student or, as the case may be, the parent or guardian or a teacher of an educational institution complains, in writing, of ragging to the head of the educational

institution, the head of the educational institution shall, without prejudice to the foregoing provisions, within seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prima facie, it is found true, suspend the student who is accused of the offence, and shall, immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institution, it is found that there is no substance, prima facie, in the complaint received; he/ she shall intimate the fact, in writing, to the complainant. The decision of the head of the educational institution shall be final.

- e) If the head of the educational institution fails or neglects to act in the manner specified in section “d” above when a complaint of ragging is made, such person shall be deemed to have abetted the offence and shall, on conviction, be punished as provided for in section “b” above.

If any of the statement made in application form or any information supplied by the candidate in connection with his or her admission is later on at any time, found to be false or incorrect, his or her admission will be cancelled, fees forfeited and he or she may be expelled from the Institute by the Vice Chancellor.

Note: The orders issued by the Hon’ble Supreme Court/High Court/Government regarding Prohibition of Ragging Act, will be made applicable as and when issued. The same shall be binding on all concerned.

6.8 RULES AND REGULATIONS ABOUT RESERVATION

Reservation in admission only for SC/ST/OBC categories on All India basis is applicable to all the Integrated Masters’ courses.

6.8.1 CASTE CERTIFICATE AND CASTE/ TRIBE VALIDITY CERTIFICATE

- a) Caste Certificate: The candidates belonging to the backward class category will be required to submit the Caste Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.
- b) Caste Validity Certificate: The candidates belonging to the SC/ST/OBC category will be required to submit the Caste/Tribe Validity Certificate at the time of admission, failing which the category claimed will not be granted and the candidate will be treated as a General Candidate.

6.9 CANCELLATION OF ADMISSION AND REFUND OF FEES:

Refund of tuition fee, development and other fees after cancellation of admission secured at ICT. Candidate who has been admitted to ICT may cancel admission by submitting an application in duplicate, in the prescribed Pro forma - E and request for refund of fees. The refund of fees as applicable shall be made in due course of time. It is made clear that such application for cancellations will be considered if and only if the admission has been confirmed by paying the prescribed tuition fee and other fees in full and by submitting all the necessary original documents. Refund rules are same across all campuses.

All Rights regarding the admissions at the ICT are reserved with the Vice Chancellor, ICT.

6.10 CENTRAL LIBRARY

6.10.1 INTRODUCTION

The ICT – IOCB Library functions as the Central Library was established in the year 2018. The Library caters to the educational and research needs of the academic community of the institute. It provides supports to both Academic and Research work. At present, the Central Library is functioning on the Ground floor of the academic building. The library provides open-access system to its user community. It is having rich collections in basic science, specialized collection in Chemical Engineering, Chemical Sciences, Chemical Technology, Material Physics, Industrial Chemistry, Pharmaceutical Engineering, Food Engineering and Its allied Subjects. The library is having access to a number of e- resources. The library is fully Automated ILMS (Integrated Library Management Software) KOHA software. Users can access the Online Public Access Catalogue (OPAC) over the Internet. Users can find out the real-time availability of library materials from their own computer terminals. The library also has a separate collection of Reference book.

6.10.2 LIBRARY TIMINGS

Monday to Saturday from 9.00 am to 5.30 pm (On Working Days)

2nd & 4th Saturday, Sundays and Holidays Library remains closed

6.10.3 LIBRARY LAYOUT

The Library is located on the Ground Floor of the C block of the Institute, is centrally accessible to all departments and centers.

6.10.4 MEMBERSHIP

Central Library provides its membership by default to all the bonafide members (students, research scholars, faculty members, and staff) of the Institute. The membership is valid as long as the user become the member of the Institute.

- The bonafide students, faculty, and Staff of the institute have book lending facility.
- Book borrowing facility can be availed against ID card.

6.10.5 LIBRARY MEMBERSHIP

- The Library is a Member of NDL Club (National Digital Library of India)

6.10.6 LIBRARY COLLECTION

The Central Library's current Book and Online E-resources collection practice aims to meet the requirements of all the Departments at ICT - IOCB.

- **Books**

The library having a good number of rich printed book collections, which aims to meet the course requirements as per the syllabus.

- **e-Library Collections**

Library has a collection of e- resources like e-databases & e-journals, accessible through Remote

Access (Through RemoteXS software) from their parent institute i.e. Prof. M.M. Sharma Library, ICT Mumbai Campus. The digital resources include e-journals from renowned publishers like Elsevier, Royal Society of Chemistry, Wiley, Nature, and Springer. Bibliographic e-databases like Scopus, Reaxys, and Web of Science etc.

- **Open Access Resources**

The Library is also providing various open access resources from different platforms.

6.10.7 LIBRARY SERVICES

The library provides services to its user community like:

Circulation	CAS (Current Awareness Service)
SDI (Selective Dissemination Service)	Reprography Service
New Books Arrival Alert	Inter Library Loan (Through Various Library Networks)
OPAC (Open Public Access Catalogue)	Reference Service
Reading Room Digital Library	Suggestion & Feedback
Plagiarism Check (iThenticate)	Literature Search (Scopus, Web of Science, Google Scholar and Other)
User Orientation	Remote Access Facility
24x7 Library Services Through WhatsApp & email.	IRINS Faculty Profile Management

6.10.8 LIBRARY IMPORTANT LINKS

IRINS: <https://iocb.irins.org/>

Library Website: <https://libraryictiocb.in/>

ICT Mumbai Library Union Catalogue: <http://ictlibrary.firstray.in/>

e-library Consortium: <https://elibraryict.remotexs.in/user/login>

6.10.9 CONTACT

Alekha Karadia (Assistant Librarian, ICT – IOC Library)

email- a.karadia@staffiocb.ictmumbai.edu.in. Phone- 0674 -2651707

6.11 MAJOR RESEARCH FACILITIES AT ICTM-IOCB CAMPUS

Several high end and research grade analytical instruments and equipment are available at ICTM-IOC Bhubaneswar Campus. A list of selected instruments is attached below:

1. High Pressure Liquid Chromatography System
2. High Pressure Thin Layer Chromatography System
3. NGC Chromatography System
4. Gas Chromatography
5. Gas Chromatograph – Mass Spectrometer
6. Gas Chromatograph – High Resolution Mass Spectrometer (GC-HRMS)
7. Contact angle meter
8. Digital Density Meter
9. Surface tensiometer
10. Raman Microscope
11. Thermogravimetric Analysis/Mass Spectrometry (TGA-MS)
12. Supercritical Extraction & Chromatography System
13. Inductively Coupled Plasma-Mass Spectroscopy spectrometer (ICP-MS Spectrometer)
14. FTIR
15. Crystal16
16. Multimode dryer

- | |
|--|
| 17. Differential scanning calorimetry |
| 18. Bench top fixed bed flow reactor |
| 19. High pressure reactor |
| 20. Electrochemical workstation |
| 21. Ion Chromatography |
| 22. Engineering Machines |
| 23. Powder X-Ray Diffractometer System |
| 24. Single Crystal XRD System |
| 25. NMR 400MHz |
| 26. TESCAN SEM with EDS system |
| 27. Joel HRTEM with EDS facility |
| 28. Joel FESEM with EDS system |
| 29. Atomic Force Microscope |
| 30. Liquid Nitrogen Plant (IMTEK Cryogenics CNP 240) |

6.12 HOSTEL FACILITY FOR ICTM-IOCB STUDENTS



1. Institute of Chemical Technology- Indian Oil Odisha Campus Bhubaneswar (ICTM-IOCB) has its temporary hostel in Khosla Hostel near academic premises of ICT-IOC. Khosla hostel has complete facilities to fulfil academic and personal potentials of students with a conducive environment to live and learn.
2. Hostel is located near to campus which is in the prime location and well connected through public transport around the city.
3. AIRPORT: - The Biju Patnaik International Airport is about 4 Km from the transit campus.
4. RAILWAYSTATION: - The Bhubaneswar Master Canteen Square (Railway Station) is about to 7.5 Km from the campus.

5. There are 4-seater rooms available in the hostel with all essential facilities.
Hostel fees: - 45,000/- INR and Mess fees: - At actuals
6. Institute has own bus arrangement for students to travel from hostel to academic premises.
7. There are separate wardens appointed ICTM-IOCB students, separate for Boys and Girls hostels.

Sr. No.	Hostel	Name	Phone
1	Head Warden-Boy's Hostel	Dr. Sanjib Acharya	+91-75970 26564
2	Warden-Boy's Hostel	Dr. Ashish Adak	+91-8910308209
3	Head Warden - Girl's Hostel	Dr. Lisa Roy	+91-90515 30481
4	Warden- Girl's Hostel	Dr. Sushma Chakraborty	+91-9706570086

8. There are indoor games arrangement inside the hostel. For an example: - Table Tennis, Carrom, Chess, Badminton, and indoor gyms as well.

6.12.1 RULES AND REGULATIONS

Hostel Timing

- Hostel gate is opened from 6:00 AM till 7:00 PM on weekdays except Sundays and Holidays
- On Sundays and Holidays, with due permission from the Hostel Superintendent, the boarders may avail local outing from 8:00 AM till 8:00 PM. Written permission must be produced before the caretaker for record before proceeding on leaving the Hostel for home or another place.

Should Obey Rules

- Food will only be served in the dining hall as per mess timings.
- Plates are strictly restricted to rooms. Anybody found will be charged as deemed to be fit.
- Boarders are not allowed moving in the floor at night otherwise will be punished.
- First-Aid service is available in the Hostel Office
- Boarders with permission from hostel authorities are allowed to visit library in the evening till 8:00 PM.
- For Wifi/Internet service for 24 hours borders have to register their Laptop with the Hostel Office.
- Taking outsiders in the Hostel or request to bring them in hostel are strictly restricted.
- Show Identity Card issued by Hostel Office otherwise entry is strictly restricted.
- Don't use any electrical and electronic equipment like iron, water heater and sound system.
- All should be present at attendance. Call will go to parent if absent during attendance time.
- Nobody is allowed to go outside after 10 PM.
- Surprise checking will be at any moment, if anything found in the room will be seized and never returned.

Indiscipline in the hostel

- Ragging, smoking, consuming alcohol, possession and peddling of narcotics/ psychotropic drugs.
- Don't use unnecessary alarm buttons/ go outside of capacity to in the lift mentioned inside.
- Maltreating or abusing hostel staff.

6.13 AUDITORIUM

The institute has a state of the art Auditorium equipped with latest hi-tech gadgets and equipment. This auditorium serves as the venue for seminars, workshops, conferences, events, presentations and display of educational videos conducted regularly by the institute.

6.14 COUNSELLING SERVICES

INSTITUTE OF CHEMICAL TECHNOLOGY, MUMBAI-INDIANOIL CAMPUS
BHUBANESHWAR
 I.Mtech. (Chemical Engineering)

OUR PLACEMENT PARTNERS

Axens
 Energy Exemplar
 GCA
 Deloitte
 IndianOil
 IFP
 SREEPATHI
 praj
 AkzoNobel
 ITPL
 YARA
 JAY
 TOYO ENGINEERING
 TATA CHEMICALS
 TEN TECHNIP ENERGIES
 pwc
 LUMMUS TECHNOLOGY
 odeliCon

OUR STUDENTS HAVE ALSO BEEN SELECTED IN MASTERS AND DOCTORAL PROGRAMMES ABROAD:

WAGENINGEN UNIVERSITY & RESEARCH

Counseling services of ICT Mumbai campus is being provided to ICTM-IOCB campus as when required.

6.15 TRAINING AND PLACEMENT CELL

Integrated M. Tech. (after 12th/HSC with 15 trimesters and alternate trimester in industry leading to 2 years experience). This is an innovative program where students may get stipend from Industry in addition to accommodation and other facilities. During the course work student will be trained in an industry leading to two years of total industrial experience. More than 50 industries are providing internships. This will help student to acquire better understanding of industrial processes/activities and in turn helps in acquiring placement. This year 10 students are going to Canada/Singapore for internship. There are many refineries and petrochemical and allied industry in the country to employ students of the ICT. Alumni are at the helm of affairs of large number of renowned chemical industries. A placement cell is launched with the participation of the UDCT Alumni Association (UAA) to assist campus placement which begins in the month of July, and continues throughout the year for students. The Institute's graduates are highly-sought after by the Indian and global chemical industry and their salaries rank among one of the highest in the country, even dwarfing the salaries of graduates of the premier branded institutes; placements achieved via campus interviews fetch emoluments ranging from Rs. 3.50 to Rs 14.00 lakhs per annum. What is most striking is that these placements are in hard-core industries relevant to the students training and education, and not in the software industry, which has been a major source for employment for graduates of some of the best institutes in India. With regards

to post-graduate research opportunities, a good number of our students are offered admission by some of the world's best universities to pursue graduate studies. The Institute is one of the few institutions in Asia that is regularly represented in the graduate student bodies of prestigious institutes such as the Massachusetts Institute of Technology, Stanford University, University of California, Berkeley, Caltech, UCSB, Princeton, University of Michigan, Ann Arbor, University of Texas, Carnegie Mellon University, Purdue University, University of Massachusetts, Cambridge University, Imperial College, Manchester University, Twente University, Monash University, to name a few. All of them receive full financial support. Several universities write to us to recommend good students. Leading foreign universities have signed MOUs for student exchange through proper support for the exchange. On an average, about 75 students from various degree programmes get such fellowships. Quite a few Ph.D. holders go abroad for post-doctoral studies in reputed institutes; this is directly linked to the quality of research outcome and personal positioning of the faculty in international community.

Highlights 2020-2021



▲ Hon'ble chief minister Shri Naveen Patnaik inaugurated Bindusagar lake cleaning by the patent of Hon'ble VC ICT Mumbai

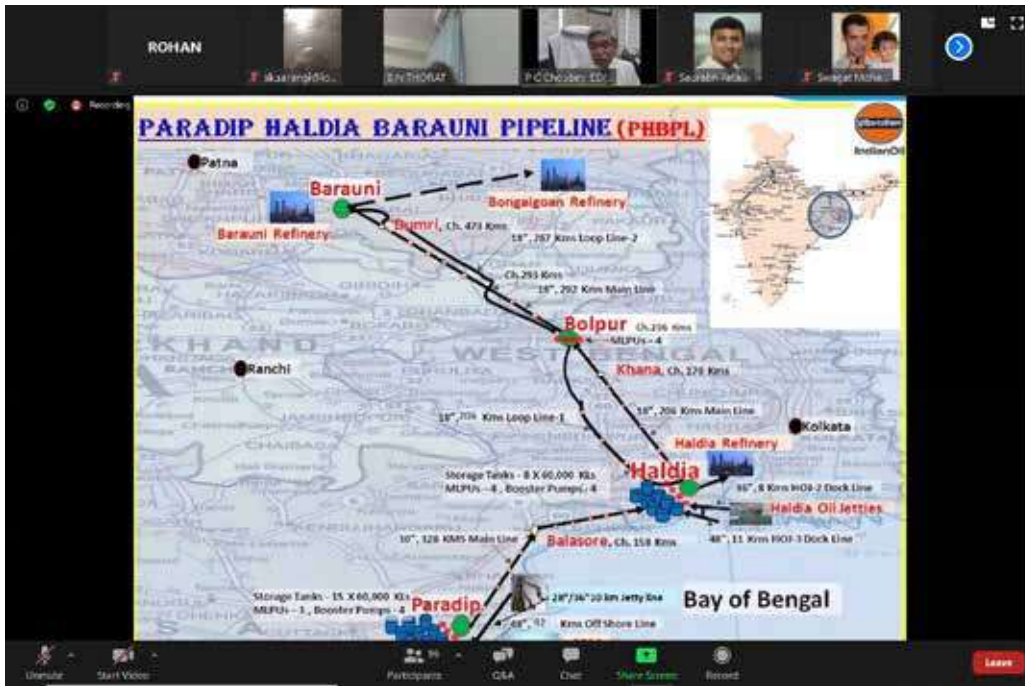


▲ Signing of agreement : cleaning of Bindu Sagar Lake (Indian Oil's CSR Initiative)



▲ 14th WFCFD Workshop on Industrial Crystallisation





▲ Zoom meeting



▲ Covid-19 testing van



▲ Cultural Program



▲ Shambhavi Award ceremony

▲ UV AeroSan developed with Technical Assistance from ICT



ICT Marathwada Campus, Jalna





MESSAGE FROM THE DIRECTOR



Dear Aspiring students and parents,

The Marathwada Campus of Institute of Chemical Technology was established at Jalna, and will now be in its fifth year of operation with the intake of fifth batch of Integrated M Tech in Chemical Engineering, and 3rd batch of (Two Year) M. Tech in Food, Pharma and Polymer.

Institute of Chemical Technology, Mumbai is synonymous with world-class education, cutting edge research, and strong Industry ties and its Jalna campus (fondly called as ICT MARJ) is not far behind. ICT MARJ is doing the same thing that Mumbai campus has been doing since the inception. The focus of the education and research is the Chemical and allied technologies. The Institute has won several accolades in research, intellectual property, Industry-Institute interactions, at National and International levels and can

be adjudged from the NIRF, QS, and other rankings.

The Integrated Masters in Technology program is unique program in the country with its trimester pattern, rigorous academic schedule and large Industrial internship component. The program duration is 5 years with three trimesters in each academic year. Of the 15 trimesters, the students undergo 9 trimesters of academics in classroom supplemented with 6 trimesters of industrial in-plant training, where the students perform projects applying the knowledge gained in the classroom to practical problems.

Simultaneously, in the tradition of ICT, Doctoral programs also began with induction of 18 PhD scholars. In 2020-21, ICT, Marathwada grew larger with starting of three M Tech Programs in Polymers Technology, Pharmaceutical Science and Technology and Foods Technology.

As IPT (In-Plant Training) is the most attractive part of ICT MARJ, the most significant part here is the Faculty and the Students and the way both of them complement each other in various respect such as teaching-learning, research, co-curricular and extra-curricular activities. The teaching staff is the mixture of both “young minds and the experienced ones”. They are not only involved in the teaching in the best way but also undertake research grants (DST-SERB and others), projects, and patents; publish in reputed journals such as Nature-catalysis; get (inter)national recognitions and awards (Royal Society of Chemistry, FMASc, etc.); and also, are the visiting faculty in international institutions/universities. Such faculty instills the research mindset among the students which is evident in their (students’) life at ICT MARJ.

The students have made the most of it which resulted in them getting their work published under the guidance of the faculty. They have also bagged summer internship at reputed universities in Canada under the scheme MITACS Globalink. This is how we at Jalna campus nurture and develop the research mindset and research culture. This does not mean students here work like machines. We provide very positive ambience to the students where they get good guidance, counselling by the experts, hands-on knowledge about what in reality industry expects from the engineers by the industry experts (we organize fortnightly “Colloquy”). Apart from this, they have college (Student) life in the form of co-curricular and extra-curricular activities, involvement and participation in various Student Clubs, through IDP, National Science Day, Pi Day, Freshers Day to name a few. To know more about it please refer to our campus newsletter- Margjal which is the mirror of our campus life. It tells you what happens at our campus, what kind of research faculty and students are involved, how things work here, and the list will go on (if I start mentioning each activity, I may end up writing a thesis!)

I welcome you to browse our website to learn about the programs, quality and the depth of the academics and research at ICT, Marathwada. I look forward to have you enrolled in the programs at ICT, Marathwada Campus, Jalna (or at ICT MARJ). My best wishes for all the readers!

Prof. (Dr.) Uday S. Annapure

B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)

DIRECTOR



IMPORTANT INSTRUCTIONS

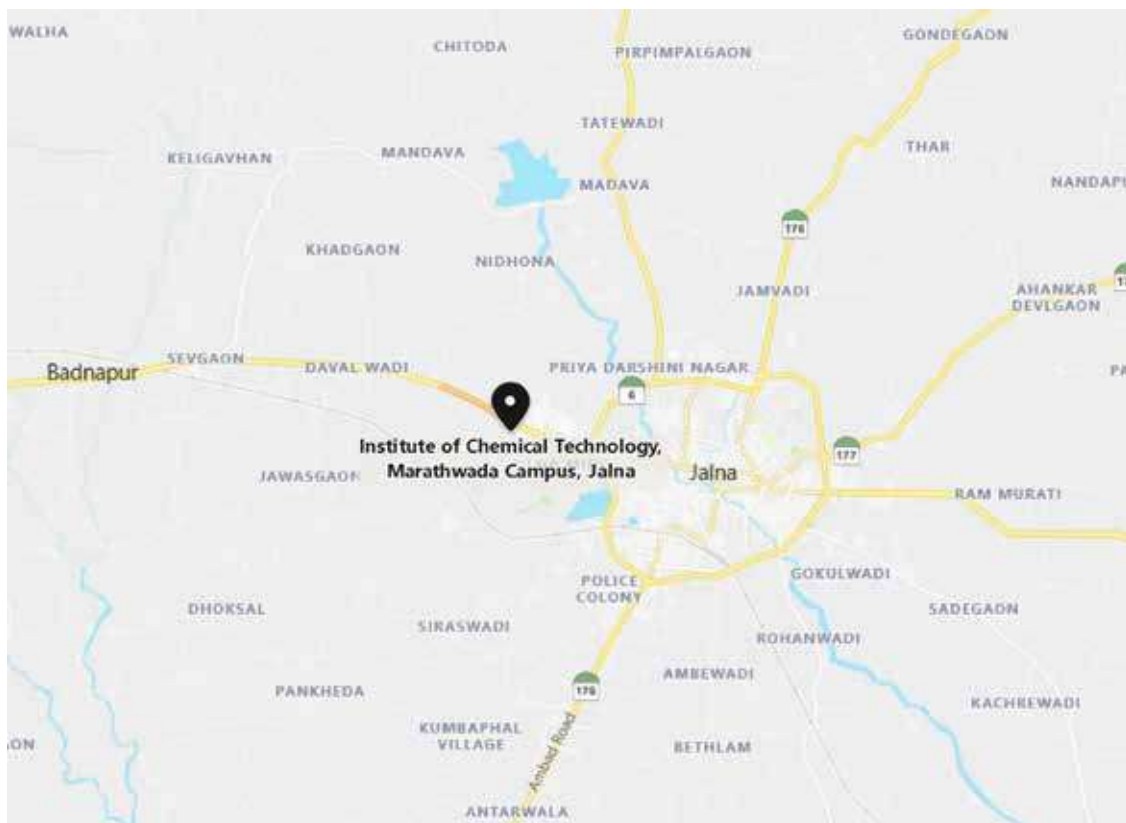
1. The fees for the submission of a single form for a particular course at ICT are as follows

Course	Open Category	Reserved Category **
Under graduate and Post graduate	Rs. 1000/-***	Rs. 500/-***

** Fees for Reserved Category candidates are applicable to the candidates from the State of Maharashtra only.

*** The payment for the same should also be made online (extra online charges may apply)

- The admission form for the academic year 2023-24 may be filled online on the ICT website, <http://www.ictmumbai.edu.in/DisplayPage.aspx?page=geandItemID=5>
- Anybody, not belonging to the Reserved Category, is found applied under that category will be disqualified.
- Please read the Handbook carefully before filling the admission form.
- Due to circumstances beyond control of authorities, the schedule of admission may change and it will be notified on the website. Candidates are advised to visit the website regularly.
- Merit list/ schedule of admission rounds for all PG courses will be displayed on www.ictmumbai.edu.in and the ICT Notice Board. Please note that no individual correspondence will be made in this regard and it is the responsibility of the candidates to visit the webpage regularly. PG candidate must visit ICT website time to time to check the timetable for written test and interview and changes if any.
- Pleading ignorance about information displayed on the web shall not be entertained.
- Admission to hostel on the Marathwada Campus, Jalna is as per the rules laid down and the quota for various courses.
- Biometric attendance system is adopted for all classrooms and Laboratories.
- There are no agencies operating on behalf of the institute and there is no capitation fee or donation in regard with admissions. Be careful of any persons claiming to offer admission to the ICT or knowing authorities. No extraneous considerations should be brought to exert pressure on the Admission Committee. It will be strictly dealt with. We take pride in fairness and openness in admissions and all matters and give justice to one and all.
- All correspondence regarding admissions at Marathwada Campus Jalna should be addressed to Director, Institute of Chemical Technology, Marathwada Campus Jalna (admissions@marj.ictmumbai.edu.in; +91 7378468193).



APPROACH ROUTES TO ICT MARATHWADA CAMPUS AND LANDMARKS

A location map of the ICT, available on Google maps, is provided above and the various access routes are described from nearby railway stations, bus stops and the airport of Aurangabad

Landmarks in the vicinity of ICT

M/s Beej Sheetal Innovations Centre Pvt. Ltd, BT-5 Biotechnology Park, Jalna Industrial Area MIDC, Additional MIDC, Aurangabad Road, Jalna, Maharashtra 431213 is a rented building by ICT, Marathwada Campus Jalna. It is on Aurangabad Highway near Sunrise Rajasthani Dhaba.

- A From Jalna Railway Station:** -Directions from Railway Station road to ICT, Marathwada Campus, Jalna. The ICT can be reached in about 15 minutes on foot following Bhagyanagar, Moti Talab, and Chandanzira, take a left turn from Sunrise Rajasthani Dhaba.
- B From Bus Stand Jalna:**-Directions from Jalna Bus Stand to ICT, Jalna Campus via Bhokaradan Naka straight on Priyanka Motors road, Hotel Flora inn and take a left turn from Sunrise Rajasthani Dhaba.
- C From Aurangabad Airport:**- Directions from Aurangabad Airport to ICT Marathwada Campus Jalna, via Aurangabad - Nagpur Rd/Jalna - Aurangabad Rd/Nagpur - Aurangabad - Mumbai Highway can be reached in 51 min. From Jalna toll, the Institute is about 1 km on the right turn from Sunrise Rajasthani Dhaba.

<https://www.google.com/maps/search/ict+jalna+marathwada/@19.90499,75.8848323,11z>



ABOUT ICT MARATHWADA CAMPUS JALNA:

Category I status enabled Institute of Chemical Technology, Mumbai to have additional off-campus apart from that in Mumbai. Institute of Chemical Technology (Mumbai) Marathwada campus Jalna, fondly known as ICT-MARJ, was established on 4th May 2018 with the assistance of the Government of Maharashtra. It was entrusted with the legacy of ICT and has paved a distinctive and innovative path. Padma Vibhushan Professor M.M Sharma inaugurated the Academic endeavor of MARJ on 28th August 2018.

VISION

To be a vibrant educational institute with innovative programs and research culture in the field of chemical and allied sciences.

MISSION

- Produce trained engineers and problem solver research fellows.
- Develop science and technologies of global standards having relevance to India as well as to local Industry from Marathwada region.
- Develop entrepreneurship and provide incubation centres for encouraging Start-ups in Marathwada Region. Catalyse the process of generating wealth from knowledge creating bridge among industry, agriculture, environment and society.

LOCAL ADVISORY COMMITTEE

LAC is formed to guide and facilitate solving local problems on the Campus. The current members are as follows:

Sr.no.	Name	Designation
1	Prof. A.B Pandit	Chairman, Vice Chancellor
2	Prof. U.S Annapure	Campus Director
3.	Shri. B.S. Khose	Chairman, UAA Marathwada Chapter
4.	Shri. Shivprasad Jaju	President, CMIA/Nominee
5.	Shri. Mahendra Bagadi	President, Rotary Club of Jalna
6.	Shri. Vijay Rathod	Collector, Jalna
7.	Shri. Nitin Janardan Narvekar	Municipal Chief Officer, Jalna
8.	Shri. Umesh T. Nagdeve	I/c Jt. Director, DTE,Aurangabad Region
9.	Shri Suresh Agarwal	Chairman, Beej Sheetal
10.	Shri. Ashish Mantri	VC's Nominee
11.	Shri Ranjeet Gulati	VC's Nominee
12.	Dr. Parag Nemade	Member Secretary
13.	Shri. Prasad Kokil	Invitee
14.	Shri. Sunil Raithatha	Invitee
15.	Shri Ghanasshyam Goyel	Invitee
16.	Shri. Nitin Kabra	Invitee
17.	Shri. G. D. Agarwal	Invitee

Hostel is set up by renting suitable premises and also some new buildings are under construction. Student activities such as cultural events, sports (Dhamaka), National Science Day Celebration, World Food Day Celebration, Colloquy (experts from various fields interact with the students), Science Quiz, Industry Defined Problems competition are being organized in addition to visit to ICT Mumbai main campus. Several factory visits are organized in every trimester. Seminars by academic experts, visit by foreign scientists, video conferencing feature regularly at Jalna campus. Good library and sports facilities are set up along with other facilities such as gym, mess and canteen. A quarterly newsletter Margjal is published regularly to capture happenings at Jalna campus and also to give opportunity for creativity of students. students are placed in different industries under IPT. Doctorate candidates have also joined, and research culture of ICT is set in! Additionally, we have Two Year Master's programme in Food Engineering & Technology, Pharmaceutical Technology and Polymer Engineering & Technology.

FACULTY PROFILE

ICT Marathwada Campus,
Jalna





PROF. UDAY S. ANNAPURE
B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)
Professor of Food Chemistry
DIRECTOR,
ICT-Mumbai Marathwada Campus,
Jalna



REGULAR FACULTY



PROF. UDAY S. ANNAPURE
B. Tech., M.Sc. (Tech.), Ph.D. (Tech.)
Professor of Food Chemistry

SUBJECTS TAUGHT:

Food Chemistry, Technology of Fruits, Vegetables and Tubers, Principles of Food Preservation, Advances in Food Engineering and Technology.

RESEARCH INTERESTS:

Extrusion Processing, Non-thermal processing of Food-Cold Plasma Processing, Carbohydrate Chemistry and Technology - Plant Gums, Traditional Foods, Nutraceuticals, Fermentative production and downstream processing of industrially important secondary metabolites.
Recognized Research Guide for: Ph.D. (Tech.) in Food Engineering and Technology, Food Biotechnology, Bioprocess Technology, Ph.D. (Sci.) in Food Science, Biotechnology

Guided students: Ph.D: 18, Masters: 83

TOTAL RESEARCH PUBLICATIONS: National: 10, International: 161, Patents: 2, Book: 1, Book Chapters: 20, H-Index: 33 (Scopus); 37 (Google Scholar), Citations: 3685 (Scopus); 5067 (Google Scholar)

AWARDS:

- Sri Somalal Vyas – SEA Innovation Award (2022)
 Recipient of “UGC-BSR Mid-Career Award Grant” (2021)
- Fellow of Maharashtra Academy of Science (2017)
- BOYSCAST Fellow (DST Govt. of India) – 2010
- Recipient of the Best Teacher Award (Professor D.V. Rege–AFST Mumbai Chapter–2011 Endowment) 2014 and 2016. Mumbai Chapter–2011 Endowment) 2014 and 2016.



Dr. PARAG R. NEMADE
B. Chem. Eng., M. S. and Ph.D. (University of Colorado)

UGC Assistant Professor, Department of Chemical Engineering and Department of Oils, Oleochemicals and Surfactants Technology

Deputy Director, Infrastructure and Lab Development, ICT, Mumbai, Marathwada Campus, Jalna (on deputation)

SUBJECTS TAUGHT :

Advanced Membrane Separations, Nanotechnology, Advanced Momentum Transfer, CE Lab, Introduction to Chemical Engineering, Materials and Energy Balance Calculations, Chemical Engineering Thermodynamics I, Momentum Transfer

RESEARCH INTERESTS :

My group works on membrane separation processes, on development of new polymeric and graphene-based materials for membranes, catalysts, and sensors applications.

We also work on sustainability engineering, in areas such as sustainable sanitation, development of new applications for industrial wastes, etc.

Recognized Research guide for Ph.D. (Tech) in Chemical Engineering, Oils, Oleochemicals and Surfactant Technology, Ph.D. (Sci) in Chemistry Guided students: Ph.D.: 05, Masters: 32 Ongoing PhD: 08, Masters: 02

TOTAL RESEARCH PUBLICATIONS- National: 01, International: 24 Patents applied: 04 Patents granted: 03, H-Index: 13 (Scopus); 13 (Google Scholar), Citations: 845 (Scopus); 1000 (Google Scholar)

Awards:

DAE Young Scientist Award, 2013,
 Reinvent the Toilet Challenge 2013 (Bill and Melinda Gates Foundation),
 Chevening Rolls - Royce science, Innovation and Leadership Fellowship 2016, Newton-Bhabha Fellowship 2017





Dr. GIRISH JOSHI

B.Sc.(Physics), M.Sc. (Physics), Ph.D., B.Ed.

Professor, Engg. Physics and Materials

SUBJECTS TAUGHT :

Engineering Physics, Material Science, Semiconductor Devices and Applications, polymer science technology, Material processing, Nano materials.

RESEARCH INTERESTS :

Polymer Nanocomposites- Battery Electrolyte Applications, Dielectric Properties, Graphene Oxide, Quantum dots, thermistor, capacitor Applications, Polymer Blends- Engg. Applications, thermal conductivity, Tribology, High performance composites, Metal Precursor- Electrical and optical properties

Recognized Research guide for: Ph.D. Plastics and Polymer (Technology), Ph.D. (Science) in Physics

Guided students: Ph.D. 06, Masters: 03, Ph. D ongoing:03

Total Research Publications: National: 02, international: 150+,

Edited Book: 03; Patents: 02, H-Index: 25 (Scopus); 22 (Google Scholar), Citations: 2000 (Scopus); 1600 (Google Scholar)

Awards:

National Best Teacher Award, 2017 (by Krishnmurty Trust, Tirupati), Maharashtra Academy of Sciences Fellow Award 2019., Life fellow Indian chemical society 2021, visiting scientist UCLM, Spain 2009, 2016.



DR. MANOJ B. GAWANDE

FRSC, docent (habil) M.Sc., Ph.D. (Chemistry), Ph.D. (Science), ICT Mumbai, Docent (Habilitation), Palacky University, Olomouc

Visiting Professor, Nanyang Technological University, Singapore. Visiting Professor, CATRIN-RCPTM, Palacky University, Czech Republic.

Fellow of Royal Society of Chemistry, London (UK)

Associate Professor in Chemistry

AWARDS:

FICS: STE Green Excellence Award 2022, Fellow of Indian Chemical Society-2021; RSC Research Grant Award-2021; Docent (habilitation)/"Associate Professor" nominated by Palacky University; FRSC 2017: Fellow of Royal Society of Chemistry (FRSC), United Kingdom; FMASc: Fellow of Maharashtra Academy of Sciences, Deans Award-2016 and 2017: By Dean of Palacky University, Olomouc; Mahatma Gandhi Pravasi Samman-2014: Ministry of Overseas Indian Affairs; Visiting Professor grant by FCT Lisbon, Portugal; BK-21 (Brain Korea) Research Fellowship Award South Korea; FCT Research Associate Fellowship; Associate Editor of Current Catalysis; Editorial Board Member of Nature-Scientific Reports; Guest Editor of ACS Sustainable Chemistry and Engineering (ACS Publications), Small and Advanced Materials Interfaces (Wiley Publications). Featured in Stanford University's global list of top 2% scientists for the year 2019, 2020 and 2021 in the Chemistry field.

SUBJECTS TAUGHT :

Organic Chemistry, Physical Chemistry, General Chemistry, Green Chemistry, Nanomaterials, Heterogeneous Catalysis

RESEARCH INTERESTS:

Nanotechnology, Nanocatalysis, Sustainable Organic Transformations, Single-Atom Catalysts, Environmental Remediation and Energy.

Recognized Research Guide for Ph.D. (Sci) in Chemistry **Guided students:** 06(ongoing); 3 (co-guided),

Total Research Publications: National: 00, International: 157 **Patents:** (01 Granted and 01- filed), H-Index: 48 (Scopus); 52 (Google Scholar), Citations: 11000 (Scopus); 1300+ (Google Scholar)

Mr. SHARAD LAHOTI

B.Sc., M.B.A., L.L.B.

Associate Dean, Industry



SUBJECTS TAUGHT :

Industrial Psychology, Financial Management and Project Finance.

RESEARCH INTERESTS :

Financial Management in Enterprises. Psychology, Financial Management and Project Finance. He has a working experience of more than 40 years in Private sector industries in Electronic, Plastics, Fertilizers, Agro Inputs etc. and in Banking sector. He has good experience in day today administration of industrial units, including all management functions, ISO and Ecocert Certifications, DSIR approval, Projects grants, Industrial promotion schemes of Government and and putting up greenfield industrial projects. He has promoted industrial units in plastics and electronics fields.

TRAINING & PLACEMENT OFFICE:

He is heading the Training and Placement Office at ICT Jalna. TPO office has close contacts with more than 100 industrial units where students are sent for industrial training in every alternate trimester. TPO office works in

close coordination with Central Placement Office at ICT Mumbai, for placement of Integrated M.Tech. and regular M.Tech. students of ICT Jalna Campus. TPO office also arranges various sessions for interviews and placement trainings and personality developments of students.



Dr. MANOJ KUMAR JADHAO

B.Sc. (Chem), M.Sc. (Anal. Chem), Ph.D. Physical Chem.,

Assistant Professor of Advance Instrumentation

SUBJECTS TAUGHT :

Chemistry-I (BST4101), Chemistry lab-I (BSP4101), Physical methods of Analysis (PYT2106), Instrumental Methods of Analysis Laboratory (PHP2505), Medicinal Natural Products (PHT 2012)

RESEARCH INTERESTS:

Protein aggregation, Phytochemical Isolation. Photophysics.

Guided Students: Ph.D. 03 (Ongoing),

TOTAL RESEARCH PUBLICATIONS: National: 00, International: 15, Book 1, Book Chapter: 3 Conference Proceeding : 02, H-Index: 08, Citations: 201

AWARDS:

National Postdoc Fellowship, 2017 (DST-SERB, Government of India),

Life Member of the Indian Laser Association (LM-1308, 2019).

DST JRF (2012), DST SRF (2015), CSIR-NET-2011



Dr. SANDEEP BHAIRAT

B.Sc. (Maths), M.Sc. (Applied Maths), Ph.D. (Applied Maths)

Assistant Professor of Engineering Mathematics and Computer Science.



SUBJECTS TAUGHT:

Advanced Calculus, Differential Equations and Integral Transforms, Numerical Techniques, Scientific Computational Tools Lab - MATLAB, Mathematical Methods in Chemical Engineering.

RESEARCH INTERESTS:

Qualitative Study of Fractional Differential Equations & Dynamical Systems, Stability and Bifurcation Analysis, Mathematical Modelling in Disease Dynamics, in Drug delivery systems, in Pharmacokinetics, in Protein Aggregation and Numerical Simulations.

Guided Students: 02 (On going)

TOTAL RESEARCH PUBLICATIONS: National: 02, International: 13

H-Index: 04 (Scopus); 09 (Google Scholar),

Citations: 57 (Scopus); 217 (Google Scholar)



Dr. NAGSEEN P. MESHARAM

B.Sc. (Physics, Chemistry, Mathematics), M.Sc. (Physics), Ph.D. (Materials Science)

Post-Doctoral Fellow- Kongju National University, South Korea (2013-2015)

Post-Doctoral Fellow- Chonbuk National University, South Korea (2016-2017)

Research Associate- Dept of Metallurgical engineering and Material Science IIT Bombay (2018-2019)

Assistant Professor of Applied Physics

SUBJECTS TAUGHT :

Engineering Physics

RESEARCH INTERESTS:

Photoelectrocatalysis, Photovoltaics, Thin film solar cell, Nanomaterial, 2D-materials Synthesis, Semiconductor Thin films, Semiconductor Devices

TOTAL RESEARCH PUBLICATIONS: National:1, International: 10

H-Index: 05 (Scopus); 05 (Google Scholar),

Citations: 106 (Scopus); 150 (Google Scholar)

Dr. KAPIL IRWANTRAO SAGROLIKAR

B.A. (English, History & Public Administration), M.A. (English),

Ph.D. (English/Interdisciplinary)

Assistant Professor of Communication Skills and Humanities (English)



SUBJECTS TAUGHT :

Communication Skills, Technical Communication & Human Values

RESEARCH INTERESTS:

English Literature, Oral Narratives, Women Studies, Bhasha Literature, Cultural Studies

TOTAL RESEARCH PUBLICATIONS: National: 04. International: 02

AWARDS:

National: (Institutional Doctoral Research Fellowship offered by CWDS (Centre for Women's Development Studies) ICSSR, New Delhi (01 October 2015- 16 August 2018)



Dr. SOMEN MONDAL

*B.Sc. (Chem.), M.Sc. (Phy. Chem.), Ph.D. (Chem)
Post-Doctoral Fellow- INST Mohali (2017-2018)
Post-Doctoral Fellow- Israel Institute of Technology (2017-2019)*

Assistant Professor of Physical Chemistry



SUBJECTS TAUGHT :

Chemical kinetics, Electrochemistry, Catalysis, Surface and interfacial chemistry, Advance Spectroscopy, Smart Polymer

RESEARCH INTERESTS:

Ultrafast Spectroscopy, Photo-induced electron transfer and proton transfer dynamics, Conductive biopolymer for optoelectronic devices.

Guided Students: PhD: 02 (ongoing),

Total Research Publications:

National: 1, International: 28, Book Chapter: 1
H-Index: 13 (Scopus); 14 (Google Scholar),
Citations: 412 (Scopus); 452 (Google Scholar)

AWARDS:

2021: Invited Speaker (RSC-chemsci-2021)
2020: JACS Young Investigators-2020,
2020: Royal Society-Newton International Fellowships, UK. 2019: The Lady Davis fellowship, Technion IIT-Israel. (declined),
2018-2019: Planning and Budgeting committee (PBC) Fellowship program, Technion IIT-Israel.

2017-2018: Grand Technion Energy program (GTEP) Fellowship program, Technion IIT-Israel.

2017 (Feb-Nov): National postdoctoral fellowship (NPDF)- India.

2013 - 2017: Senior Research Fellowship (SRF), IISR Kolkata. 2011 - 2013: Junior Research Fellowship (JRF), IISR Kolkata. 2009 - 2011: West Bengal Govt. Merit-Cum-Means Scholarship Scheme (WBG M-C-M) for pursuing M.Sc. NIT Durgapur.



Dr. DEBASHIS KUNDU

*B.E. (Chemical Engineering), M.Tech. (Chemical Engineering),
Ph.D. (Chemical Engineering)*

Assistant Professor of Chemical Engineering

SUBJECTS TAUGHT :

Thermodynamics-I, Chemical Engineering Thermodynamics-II, Chemical Process Control, Advanced Transport Phenomena, Energy Engineering, Conventional Energy and Utilization, Advanced Thermodynamics for Energy Systems, Petroleum Economics and Management, Biochemical Engineering, Process Simulation Laboratory-I, Process Simulation Laboratory-II, Chemical Engineering Laboratory

RESEARCH INTERESTS:

Thermodynamics, Molecular Dynamics Simulation, Polymeric Gel, Enhanced Oil Recovery

Guided Students: PhD: 02 (ongoing), Integrated M. Tech: 15 (ongoing)

Total Research Publications: International: 30, H-Index: 12 (Scopus); 12 (Google Scholar), Citations: 416 (Scopus); 455 (Google Scholar)

AWARDS:

2012: Ambuja's Young Researcher's Awards for doing post graduate studies in India.

2018: Best Poster Award in Research Conclave'18, IIT Guwahati, India.

2018: Conclave'18, IIT Guwahati, India.



Dr. SAURAV RAJ

B.Sc Engg. (Electrical and Electronics Engineering)

Ph.D. (Electrical Engineering)

Assistant Professor of Electrical engineering.



SUBJECTS TAUGHT :

Basic Electrical Engineering, Computer Application in Power System, FACTS, Electronics Instrumentation

RESEARCH INTERESTS:

Renewable energy, Swarm and evolutionary optimisation techniques, Intelligent techniques to control power system, Optimisation and control of stochastic systems, Power system analysis and optimisation, FACTS devices, Distributed generation, Swarm and evolutionary optimisation techniques, Power system planning

Guided Students: UG-13, PG-00, Ph. D-01 (ongoing)

Total Research Publications: National: 01, International: 47; H-Index: 12 (Scopus); 14 (Google Scholar), Citations: 549 (Scopus); 718 (Google Scholar)

AWARDS:

2019: Best paper presentation awarded in 1st International Conference on Innovation in Electrical Power Engineering, Communication, and Computing Technology, Springer on 13th-14th December, 2019.

2020: Best paper presentation awarded in 2020 International Conference on Emerging Frontiers in Electrical and Electronic Technologies (ICEFEET) at NIT Patna on 10-11 July 2020.



Dr. JOYITA SARKAR

B.Sc. Microbiology (Hons.), M.Sc. Biotechnology,

Ph.D. Biological Sciences & Bioengineering

Assistant Professor

SUBJECTS TAUGHT :

Biological Sciences & Engineering; Biochemistry/ Microbiology; Biochemical Engineering, Advanced Biochemistry, Bioprocess Engineering & Technology

RESEARCH INTERESTS:

Biomaterials: Effect of mechanical properties of 3D scaffolds; 3D Bioprinting, Drug metabolism and Toxicity: 3D cell culture system for high throughput studies, Tissue Engineering.

Guided Students: PhD: 0; Project Assistant: 1 (ongoing)

Total Research Publications: National: 01 International: 11, Book Chapter: 02, Conference Proceedings: 2; H-Index: 06 (Scopus); 07 (Google Scholar), Citations: 172 (Scopus); 206 (Google Scholar)

AWARDS:

Outstanding DST-AWSAR Award 2019 (PDF category); SERB-NPDF Award (2018); Best Oral Presentation Award in 5th Annual International Conference on Advances in Biotechnology (2015); CSIR SRF-NET (2012); CSIR JRF-NET (2010); University Gold Medal, University of Burdwan (2010); Late Kamala Mallick Prize University of Burdwan (2010); DBT Studentship (2008).

CONTRACTUAL FACULTY

Dr. ATUL H. BARI

B.Tech. (Chem.), M.Chem.Engg. Ph.D. (Chem.Engg).

Assistant Professor (Temporary)



SUBJECTS TAUGHT :

Mass transfer operations, Separation Processes, Multiphase reactor design, Introduction to petroleum technology, Petroleum refining processes, Refinery engineering.

RESEARCH INTERESTS:

Mathematical Modelling and Simulation, Chemical Kinetics, Crystallization, Nanomaterial synthesis

TOTAL RESEARCH PUBLICATIONS:

International: 09, H-Index: 06 (Scopus); 06 (Google Scholar), Citations: 103 (Scopus); 122 (Google Scholar)

AWARDS:

2019: DST-SERB National post-doctoral fellowship.



Dr. NAVNATH HANAVTE

M. Pharm., Ph.D. (Tech) Pharmaceutical Chemistry

Assistant Professor in Pharmaceutical Technology

SUBJECTS TAUGHT :

Pharmaceutical Organic Chemistry, Pharmaceutical Inorganic Chemistry, Medicinal Chemistry, and Industrial Pharmacy.

RESEARCH INTERESTS:

Drug Design and Development, Development of Novel Methodologies for the synthesis of API'S and it's Intermediates, Process Chemistry, Excipient modification and their application in drug delivery.

TOTAL RESEARCH PUBLICATIONS:

International: 17,
H-Index: 07 (Scopus); 08 (Google Scholar),
Citations: 81 (Scopus); 91 (Google Scholar)

AWARDS:

Awarded PG Scholarship for master studies by UGC form 2012-2014.
Awarded UGC-BSR fellowship for the Ph.D. studies at Institute of Chemical Technology, Mumbai
Best poster presentation award in the 6th international symposium on current trends in discovery and research held at CSIR-CDRI, Lucknow (March 2013)



Dr. SANDHYA SHEWALE

M.Sc. (Food Technology), Ph.D. (Engineering Sciences)

Assistant Professor in Food Technology



SUBJECTS TAUGHT :

Introduction to Food Technology, Advanced Food Technology, Food Chemistry, Comprehensive Techniques in Food analysis, Enzymes in Food and Feed Industry, Food Ingredients and Additives.

RESEARCH INTERESTS:

Innovative Combinational Drying Technologies, Hurdle Technology for Preservation of Fresh Foods, Light-Based Processing, Non-Thermal Processing of Foods.

TOTAL RESEARCH PUBLICATIONS:

International: 7.

H-Index: 7 (Scopus); Citations: 167

AWARDS:

- AWSAR Award for Popular Science Story under Ph.D. Category by Department of Science and Technology, Government of India, 2020;
- DST-INSPIRE Fellowship for Doctoral Research by Department of Science and Technology, Government of India, 2015;
- Junior Research Fellowship for Post-Graduation Studies by Indian Council of Agriculture Research, 2011;
- Awarded University Gold Medal by VNMKV formerly known as Marathwada Agricultural University, Parbhani, Maharashtra, 2012.



DR. SUPRIYO KUMAR MONDAL

M. Tech. (Chemical Engineering), Ph.D. (Tech) (Chemical Engineering)

Assistant Professor in Chemical Engineering

SUBJECTS TAUGHT :

Advanced Mass transfer, Energy Conversion and Storage, Process Development and Engineering, Environmental Engg and Process Safety

RESEARCH INTERESTS:

Membrane Technology, Wastewater Treatment, Recovery of Bioactive Compounds, Nanotechnology, Hydrogen Production.

TOTAL RESEARCH PUBLICATIONS:

International: 05 Conference Proceedings: 07

H-Index: 04 (Scopus); 04 (Google Scholar),

Citations: 87 (Scopus); 97 (Google Scholar)

Dr. SHRIKANT METE

B.Tech. (Chemical Engineering), M.Chem.Engg. (Chemical Engineering), Ph.D. (Chem.Engg).

Assistant Professor in Chemical Engineering



SUBJECTS TAUGHT :

Process Development and Engineering, Material Science and Engineering, Life Cycle Analysis, and Multiphase Reactor Design.

RESEARCH INTERESTS:

Scheduling, Process Optimization, Data Science, Machine Learning, and Reaction Kinetics

TOTAL RESEARCH PUBLICATIONS:

International: 01 Conference Proceedings: 01
H-Index: 01 (Scopus); 02 (Google Scholar), Citations: 04 (Scopus); 05 (Google Scholar)

INDUSTRIAL EXPERIENCE: Senior Scientist, Biocon Limited, Bangalore.

AWARDS:

2014: DST-SERB Doctoral fellowship
2019: First prize in “Senior industry defined problem”, VORTEX 2019 at ICT, Mumbai,



MR. AJINKYA MADAN SATDIVE

B.Tech. (Plastic and Polymer Engineering), M. Tech (Polymer Engineering)

Assistant Professor in Polymer Engineering

SUBJECTS TAUGHT :

Polymer Blends and Alloys, Processing and Applications of 3D Printing, High Polymer Chemistry

RESEARCH INTERESTS:

Polymer Modification for Sustainable Application

TOTAL RESEARCH PUBLICATIONS: National:0,
International: 05 H-Index: 03 (Scopus); 03 (Google Scholar),
Citations: 55 (Scopus); 63 (Google Scholar)



MS. NAMITA KARNA

B.Tech (Chemical Engineering), M. Tech (Polymer Nanotechnology)

Assistant Professor in Polymer Engineering



SUBJECTS TAUGHT :

Material Processing, Polymer Processing and Technology, High Polymer Chemistry, Polymer Science and Technology

RESEARCH INTERESTS:

Polymer Resin Modification for Sustainable Application, Polymer nano-composite for EMI shielding Application.

TOTAL RESEARCH PUBLICATIONS: National:0, International: 04 H-Index: 03 (Google Scholar), Citations: 55 (Google Scholar) Subjects



MR BHUSHAN D. PATARE

B.Tech (Oils, Oleochemicals and Surfactant Technology), M.Tech (Oils, Oleochemicals and Surfactant Technology)

Assistant Professor in Lipid Technology

SUBJECTS TAUGHT :

Introduction to Lipids Technology, Lipid Processing Technology, Chemistry of lipids and their applications, Production and Applications of Soaps, Surfactants and Detergents, Technology of Oleochemicals, Essential oils and Cosmetics, Lipids Lab.

RESEARCH INTERESTS:

Polymeric Surfactants, Oleochemical synthesis, Bio-lubricants, Improved surfactant system for better detergency on complex stains

ADJUNCT PROFESSOR



Dr. KISHORE M PAKNIKAR

MSc, PhD

Ex. Director, Agharkar Research Institute, Pune

SUBJECTS TAUGHT :

Nanobiotechnology, Environmental biotechnology.

RESEARCH INTERESTS:

Applications of nanotechnology in biology, medicine, agriculture and environment

Guided Students: PhD: 39, MD: 1, MSc: 2

Total Research Publications: National: 10, International: 155, Patents: 35 granted + 10 applied, Google Scholar: h-index: 41; Citations: 8524

AWARDS:

Biotech Research Society of India Industrial Medal Award- 2007, Society for General Microbiology

UK Third World Microbiology Fund award-1987, United Nations Environment Program (UNEP) scholarship-1982, Fellow, National Academy of Agricultural Sciences (FNAAS)-2010, Fellow, Association of Microbiologists of India (FAMI)-2007, Fellow, Biotech Research Society of India (FBRS)-2004, Fellow, Maharashtra Academy of Sciences (FMAS)-1996, Marico Industries Visiting Fellow, Institute of Chemical Technology, Mumbai- 2009 Prof JV Bhat Oration Award, MAHE, Manipal-2021

Dr. NANDKUMAR KUNCHGE

Director at K J Somaiya Institute of Applied Agricultural Research, Sameerwadi, Dist Bagalkot, Karnataka



SUBJECTS TAUGHT :

Bioengineering

RESEARCH INTERESTS:

Plant Biotechnology, Organic and Regenerative Agriculture

Guided Students: Ph.D. 3, B. Tech: 04

Others: Twelve BCIL trainee guided for their industrial Projects.

Total Research Publications: National: 02, International: 01

LIBRARIAN



Dr. HITENDRA PATIL

B.Sc. (Comp. Sci.), M.L.I.Sc., Ph.D. Library and Information Science

Librarian

RESEARCH INTERESTS:

Information Seeking Habits, Citation Analysis, Authorship Pattern, Content Analysis & Bibliometric Analysis

Total Research Publications:

National: 04, International: 13,

H-Index: 1 (Scopus); 3 (Google Scholar),

Citations: 1 (Scopus); 46 (Google Scholar)



VISITING FACULTY

PROF. PANKAJ K. BHOYAR

M.Tech (CAD/CAM), MBA (Mfg. Mgmt.)

Assistant Professor, Mechanical Engineering Department, MSSCET, Jalna

SUBJECTS TAUGHT:

CAD/CAM/CAE, Computer Software Applications I & II, Machine Drawing, Project Management & Operations Research, Automatic Control System, Non-Conventional Energy Systems

RESEARCH INTERESTS:

Statistical Methods, Optimization Techniques, Advanced Optimization Techniques

GUIDED PROJECTS: UG level: 15

TOTAL RESEARCH PUBLICATIONS: National: 16, international: 18,

Patent: 01, Scopus: H-index: 02 Citations: 20

AWARDS:

Proud Supporter Award given by Young Inspirators Network (YIN), Sakal Media Group in 2017



DR SHANTANU KRISHNARAO SAMANT

Ph.D. Tech. (Food Technology)

Associate Director (R&D), Mondelez International Ltd. (Retd)

SUBJECTS TAUGHT :

Carbohydrate Chemistry & Technology, Biotechnology of Fermented Foods; Food Chemistry

RESEARCH INTERESTS:

Food products formulation (chocolate, confectionary & cocoa drinks) for well-being and affordable nutrition, , specialty fats & its applications ; Cocoa & Chocolate science

Total Research Publications: 13

National: 05, International: 08, Conference Proceedings: 02 (National)

Patents: 02 (Awarded) 2 (in process) 2 (trade secrets)

Awards:

Received 5 awards from company, Mondelez International, & also one Global RDQ achievement award received in 2020.

Professional Services: Founder & Head- 3SB Consultants, Mumbai;

Visiting faculty- ICT – Mumbai, Jalna & Bhubaneshwar (from 2017 – till today); Associate Director R&D (retired)- Mondelez International Ltd.;

Research Council member CFTRI (2013-2015), Regulatory Committee

member PFNDAI (past); Research Committee member for Food Tech

Dept, ICT (past); Examiner for M. Tech and Ph.D. Tech (Food) thesis for

ICT (Mumbai) (continued)

Professional Membership: Life Member AFST(I)





Dr. SATISH V. ROJEKAR

B. Pharm, Govt. College of Pharmacy Aurangabad

M.Pharm (Pharmaceutics), ICT, Mumbai

SUBJECTS TAUGHT :

Nanomedicine, Drug Delivery Technology, Physical Pharmacy, Advanced Pharmaceutics and Biopharmaceutics

RESEARCH INTERESTS:

Protein and peptide drug delivery, Microneedle-based drug delivery, Nanomedicine, Nanomaterial synthesis, Advanced Drug Delivery, Novel drug delivery and Technology Development, Preclinical development of small and large molecules, Plasma medicine, Advanced Characterization of Pharmaceutical Products and Analytical Method Development, Toxicity Evaluations, Oxidative Stress Management in Chronic Diseases and HIV infection.

Total Research Publications:

National: 00, International: 21, Patents: 03, Book Chapter: 03, Peer Review: 22
H-Index: 06, Citations: 120, Patents Granted: 00

AWARDS:

Newton-Bhabha Fellow, British Council (UK) and Department of Biotechnology, India (2019), NFSC Fellow Government of India (2017), BARTI Fellow Government of Maharashtra (2016), AICTE Fellow Government of India (2013), Gate Biotechnology Fellow Government of India (2013), Nanochallenge Appreciation Award 2017, NIPER JEE award 2013, Biotechnology Travel Award 2018.

MADHAV KULKARNI

Global Sr. Intellectual Capital Manager at Dow.

Madhav Kulkarni is Global Sr. Intellectual Capital Manager at Dow. He has over 24 years of experience in R&D and IP influencing research, innovation, and business. He enjoys connecting dots between products, IP, players, and markets.

Madhav has experience in pharma, biotech and chemical industry. Earlier to Dow, he worked at Serum Institute (Pune) and Biocon (Bangalore). He is a registered Patent and Trademarks agent in India. He is a certified Six Sigma Green Belt Project leader and, in 2023 earned Google Project Management certification. In 2013, he secured Gold Medal in Executive Education program in Strategic Management from IIMK. Earlier got his masters from UDCT (ICT), Mumbai.



DR. RAMAJANAKI IYER

*BPharm(UDCT), MMS (Master of Management Studies), Ph.D (Organizational Behaviour)
Faculty (Management)*

SUBJECTS TAUGHT :

Industrial Psychology, Human Resources Management, Industrial Management (General management and Marketing management), Perspectives of Science Technology and Society, Biostatistics (usage of software SPSS), Communication Skills and ethics.

RESEARCH INTERESTS:

Stress management, Defense mechanisms, Addiction behaviours, Environmental studies and societal impacts, Interplay of science technology and society.

Total research publications: National: 01, International: 17

AWARDS:

Dr Rajadhyaksha Best Teacher's award for Final Year B Chem Engg, ICT Mumbai (2018-19)

Best Teacher's award, Final BTech, ICT Mumbai(2017-18).





DR. JAYANT R. BANDEKAR

M.Sc., Ph.D. (Microbiology) Retired Head, RB&HSD, Head, Food Microbiology & Seafood Technology Section, Food Technology Division, Bhabha Atomic Research Centre, Mumbai

SUBJECTS TAUGHT:

Food Safety & Toxicology

RESEARCH INTERESTS:

Food-borne bacterial pathogens, application of radiation processing for preservation and hygienization of food.

GUIDED STUDENTS: Ph.D. 08

Total Research Publications

National: 00, International: 62, Book Chapter: 06

H-Index: 26, Citations: 1550

AWARDS:

Fellow of Maharashtra Academy of sciences 2011

Marico Industries Visiting Fellow, Institute of Chemical Technology, Mumbai- 2013

Dr. VAIBHAV TIDKE

B.Chem.Engg, M.Chem.Engg, PhD., CEO and Cofounder, S4S Technologies

SUBJECTS TAUGHT:

Perspectives of Society, Science and Technology

RESEARCH INTERESTS:

Solar energy, food processing, climate change, sustainability, food-energy-nutrition nexus.

Total Research Publications: 2

AWARDS:

United Nations Environmental Leadership Award (Germany),

Zayed Sustainability Award (UAE),

Indian National Academy of Engineering- Young Innovator and Entrepreneurship Award (GoI),

Best Startup Award- Government of India,

ICT Young Distinguished Alumni Award.



COUNSELLING SERVICES



Ms. SAVITA SATPUTE
ICT MARJ Counsellor

Ms Savita Satpute is the founder of Sarvaprit Counselling Center, Aurangabad. She has joined ICT MARJ as the counsellor in the month of July 2022. She has been into this field for over 20 years. Her expertise lies in mediation, spirituality, psychotherapies, personal counselling, etc. She has given two Talks for the 2020 and 2021 batch respectively. Apart from these general sessions, she has also taken personal counselling sessions and telephone session for the students of all the batches. The students have shown tremendous change and their feedback is quite satisfactory. She has prepared worksheet to carry out in future which includes general and personal sessions, 5 Day workshop on Meditation for students and staff and the like. For new batches of students, she conducts orientation and workshop on building Self-Esteem and Confidence, Emotional Intelligence, Handling Changes, Time Management, Study Techniques and Adaptability. Tele-counseling and counseling through emails for various student concerns are taken too.

Mr Mayuresh Joshi from the Organisation for Graphology and Graphotherapy, Pune conduct psychometric evaluation for the Students, Support Staff and the Faculty every year. He is also constantly developing the skills and knowledge, abilities, attitudes, personality traits and educational achievements of the students.

7.1 PROGRAMMES OFFERED AND CRITERIA OF ELIGIBILITY FOR ADMISSION

7.1.1 PROGRAMMES OFFERED

INTEGRATED MASTERS PROGRAMMES

Sr.	Programme	Major	Minor	Intake
1.	Integrated M.Tech.	Chemical Engineering	Energy Engineering	60
			Food Engineering and Technology	
			Lipid Engineering	
			Petrochemical Engineering	
			Pharmaceutical Technology	
			Polymer and Materials Engineering	

* 5 years after 12th Std. or equivalent

MASTER'S DEGREE (FULL TIME, 2 YEARS) PROGRAMMES

Sr	Post Graduate Programme	Sanctioned Intake	Required qualification
1	M.Tech (Food Engineering and Technology)	18	B.E/B.Tech/B.Sc.(Tech) in Food Engineering and Technology/Food Engineering/Food Technology/Food Science/Food Process Engineering .
2	M.Tech (Pharmaceutical Technology)	18	B.Sc.(Tech) in Pharmaceuticals and fine chemicals/B.Tech in Pharmaceutical Chemistry and Technology/B.Pharm or equivalent B.Tech with pharmacy background only.
3	M.Tech (Polymer Engineering and Technology)	18	B.E/B.Tech/B.Sc(Tech) in Polymer Engineering and Technology/Plastics Technology/Plastic Processing/Rubber Technology/Petrochemicals and Chemical Engineering

DOCTORAL PROGRAMMES

Table 2 : Different Specializations of Doctoral Degrees

Sr. No.	Programmes	Specialization
1.	Ph.D. (Tech.)	Bioprocess Technology
2.		Chemical Engineering
3.		Food Biotechnology
4.		Food Engineering and Technology
5.		Green Technology
6.		Lipid Engineering
7.		Perfumery and Flavour Technology
8.		Petrochemical Engineering
9.		Electrical Engineering
10.	Ph.D. (Sci.)	Biotechnology
11.		Chemistry
12.		Food Science
13.		Mathematics
14.		Physics

All Ph.D. programs have course work as per UGC regulations.

Please refer to chapter 3 for eligibility criteria and other important information for Master's programmes (2 year full time) and Ph.D. (Tech)/ Ph.D. (Science) programmes.

7.1.2 ADMISSION PROCEDURE

ADMISSION TO FIRST YEAR OF INTEGRATED M.Tech PROGRAM IN FOLLOWING COURSES

Application Procedure

All admissions will be conducted by the Institute of Chemical Technology, Mumbai Campus

For online admission form visit <http://www.ictmumbai.edu.in>

Admission Quota For All Integrated M. Tech. Courses Are As Follows.

Please note that a separate online application on ICT website is necessary for admission.

Admission rounds will be carried out by ICT, Mumbai.

The availability of seats (60) for these courses shall be as:

- A) 70% for state of Maharashtra (through MHT CET - 2023) and
- B) 30% for all India (all states and union territories including Maharashtra) through JEE main paper 1 - 2023

Integrated Master Courses of Studies and Intake Capacity

All integrated programmes are passed HSC or its equivalent examination with physics, chemistry and mathematics as compulsory subjects and obtained at least 50% marks in aggregate (at least 45% marks, in case of backward class categories and persons with disability candidates belonging to Maharashtra state only).

Integrated Master of Technology (M. Tech.) in :

Sr.	Specialization	Minor	Intake
1.	Chemical Engineering (Major)	Polymer and Materials Engineering	10
2.		Food Engineering and Technology	10
3.		Pharmaceutical Technology	10
4.		Lipid Engineering	10
5.		Energy Engineering	10
6.		Petrochemical Engineering	10

Reservations:

All the reservations given below shall be applicable to candidates belonging to Maharashtra state only subject to the fulfilment of the eligibility criteria specified by respective authorities from time to time.

Reservation for backward class category candidates: the percentage of seats reserved for candidates of backward class categories belonging to Maharashtra state is as given below. The percentage of reservation is the percentages of the seats available for Maharashtra candidates. Backward class candidates shall claim the category to which they belong to at the time of submission of application form.

Sr.	Category of Reservation	Percentage of Seats Reserved
1.	Scheduled Castes and Schedule Caste converts to Buddhism (SC)	13.0%
2.	Schedule Tribes (ST)	7.0%
3.	Other Backward Classes (OBC)	19.0%

Programme Structure

The Programme has a trimester-based structure. Each trimester consisting of 4 months, approximately 12 weeks of teaching. The schedule of trimesters is as follows:

Year	Trimester	Scheme of Trimesters
1	T1	Theory
1	T2	Theory
1	T3	In-Plant
2	T4	Theory
2	T5	In-Plant
2	T6	Theory
3	T7	In-Plant
3	T8	Theory
3	T9	In-Plant
4	T10	Theory
4	T11	In-Plant
4	T12	Theory
5	T13	In-Plant
5	T14	Theory
5	T15	Theory

Fees, Concessions, Cancellations And Refund:

Course Fees Prescribed:

The candidates to be admitted during 2023-24 for Integrated M Tech are required to pay fees as prescribed by the state government. The institutional fees to be paid by all the admitted candidates are as follows:

Sr.	Type of Fees	Open And All Reserve Category Students Fee For 1 st Year (₹)
1.	Library Deposit	5,000/-
2.	Fees	90,100/-
	Total	95,100/-

Course Fees Prescribed for M. Tech.:

The candidates to be admitted during 2023-24 for Two-Year M Tech are required to pay fees as prescribed by the state government. The institutional fees to be paid by all the admitted candidates are as follows:

Sr.	Type of Fees	Open And All Reserve Category Students Fee For 1 st Year (₹)
1.	Library Deposit	5,000/-
2.	Fees	87,000/-
	Total	92,000/-

Second Year Fees: Rs. 1,00,000/-



Academic Calender 2023-24

(A) INTEGRATED MASTERS PROGRAMMES

TRIMESTER 1: July 01, 2023 to October 31, 2023

TRIMESTER2: November 01, 2023 to Feb 29, 2024

TRIMESTER3: March 01, 2023 to June 30, 2024

Note – The above-mentioned dates are tentative and likely to change based on admission round. The integrated master program is TRIMESTER pattern. Each trimester is of Four-month duration.

(B) MASTERS PROGRAMMES

As per ICT, Mumbai Academic Calendar for Masters Programmes

(B) DOCTORAL PROGRAMMES

Academic Year: July 01, 2022 to June 30, 2023

Note – the above-mentioned dates are tentative and likely to change based on admission round.

7.2 ICT-MARJ CENTRAL LIBRARY

Introduction

The Central Library was established in the year 2018. It is a special library. The Library caters to the educational and research needs of the academic community of the institute. It provides supports to both academic and research work. At present the Central Library is functioning on the first floor of the academic building. The library provides open-access system to its user community. It has a good number of collections in basic science, specialized collection in Chemical Engineering, Chemical Sciences, And Chemical Technology, Material Physics, Industrial Chemistry, Communicaton Skills, and Technical Communication, etc. It is also has a number of reference books and Journals. The library has access to a number of e-resources. The library is fully automated with the help of KOHA software. Users can login freely, Web-OPAC which is currently on the intranet gives detailed information about library books. Users can find out the real-time availability of library materials from their own computer terminals. The library also has a separate collection of Reference book.

Membership

1. IIRS (Indian Institute of Remote Sensing): ICT Mumbai Marathwada Campus Jalna is now the network institute of IIRS /ISRO outreach network. (Five students have completed and certified with IIRS Courses)
2. SWAYAM/ NPTEL: ICT Mumbai Marathwada Campus Jalna is now the member of SWAYAM/ NPTEL local chapter.

Library Timings

Monday to Saturday from 9.00 am to 6.30 pm (On Working Days)

Library remains closed on Sundays and Holidays.

Library layout

The library is located on the first floor of the academic building of the institute and is centrally accessible.

Membership

The bonafide students and faculty of the institute have book lending facility. Book borrowing facility can be availed against ID card.

Library collection: Printed Resources

• Books

The library has substantial number of latest Indian as well as international edition printed books in its collection. The books are in the area of Physics, Chemistry, Mathematics, Applied Chemistry, Chemical Technology, Chemical Engineering, Industrial Chemistry, Material Physics, Environmental Science, Food Technology, Polymer Science, Textile Technology etc.

• Printed Journals

The library subscribes to a number of national and international scholarly journals from renowned publishers like Elsevier, STM, Advanced Research Group and others.

Digital Resources

Library has a collection of e-resources like e-databases & e-journals, accessible through remotex software from their parent institute i.e. Prof. M.M. Sharma library, ICT Mumbai Campus. All digital library resources available at the ICT, Mumbai are available in ICT, MARJ. The digital resources include e-journals from renowned publishers like Elsevier, Royal Society of Chemistry, Wiley etc. And e-databases like Scopus, Web of Science, Reaxys, etc.

Library Services

The library provides services to its user community like,

- Circulation
- CAS (current awareness service)
- SDI (selective dissemination service)
- Reprography service
- Scanning service
- New books arrival
- OPAC (open public access catalogue)
- Reference service
- Reading room
- Digital library
- Suggestion & feedback

Library Portal

Library portal can be accessed through <http://ictlibrary.firstray.in/>

Contact:

Dr. Hitendra J. Patil, Librarian,

email : hj.patil@marj.ictmumbai.edu.in / librarian@staffmarj.ictmumbai.edu.in

7.3 MAJOR RESEARCH FACILITIES AT ICT-MARATHWADA CAMPUS

X-Ray Diffractometer (XRD)

Make:	Bruker, Germany
Model:	Bruker D8 ADVANCE DA VINCI fully Automatic Powder X-ray Diffractometer System
Specifications :	Traditional X-ray powder diffraction (XRPD) Grazing incidence diffraction Rotating sample stage Accuracy in peak positions $\leq 0.01^\circ 2\theta$ LYNXEYE XE-T detector TRIO and TWIN optics Dynamic Beam Optimization Anton Paar HTK 16N for non-ambient conditions (25 to 1600 °C)



About Equipment:	The D8 ADVANCE is based on the unique D8 diffractometer family platform and is perfectly designed for all X-ray powder diffraction and scattering applications.
Applications:	<ul style="list-style-type: none"> • Identification of both crystalline and amorphous phases and determination of specimen purity • Quantitative analysis of both crystalline and amorphous phases in multi-phase mixtures • Microstructure analysis (crystallite size, microstrain, disorder) • Texture (preferred orientation) analysis • Indexing, ab-initio crystal structure determination and crystal structure refinement



Fourier Transform Infrared Spectrophotometer

Make:	JASCO
Model:	JASCO FT/IR 6600
Specifications :	Range:7800-0cm-1 Accessories: ATR Pro One, Pellet Holder Resolution: 0.4 cm-1 Scanning rate: 8-64 cycles S/N ratio: 45,000:1



About Equipment: The FT/IR-6600 offers the absolute highest level of performance in the industry with the highest signal-to-noise specifications. The FT/IR-6600 provides a high level of functionality and high accuracy measurement capability.

Applications:

- Chemical Compositions
- Functional group identification

UV-Visible Spectrophotometer

Make:	Wensar
Model:	LMSP-UV1900 UV-Vis. Double Beam Spectrophotometer
Specifications :	Optical system: Double beam Wavelength range: 190-1100 nm Detector: silicon photodiode Lamps: D2 Lamp & Tungsten Halogen Lamp (W Lamp) Wavelength accuracy: ± 0.3 nm Wavelength Repeatability: ± 0.2 nm Resolution and bandwidth : 0.5nm Curve and Data: wavelength scanning, standard curve, multi wavelength scanning



About Equipment: The two detectors are used to measure sample and reference respectively and simultaneously for optimizing measurement accuracy. Lamp selection enables conserving the life of D2 & Tungsten lamps with real-time clock for date & time stamping of results

Applications: Qualitative and Quantitative Analysis

- Chemical Kinetics
- Protein/ RNA/DNA quantification
- Metal concentration
- Validation

UV-VIS NIR Differential Reflectance Spectroscopy

Make:	Shimadzu
Model:	UV-2600i
Specifications :	Wavelength range – 185- 900 nm UV 100 mm cell GS Kit Integrating Sphere Attachment ISR 2600 Film Holder Multi-cell sample compartment unit Thermoelectric single cell holder



About Equipment: UV-2600i is a single monochromator system, whose wavelength range can easily be expanded to the near-infrared region of 1400 nm using the optional integrating sphere. The UV-2600i is also equipped with Shimadzu's proprietary Lo-Ray-Ligh grade diffraction grating, which achieves high efficiency and low stray light levels giving significant noise reduction.

Applications:

- Measurements of Solar cell anti-reflective films and polycrystalline silicon wafers
- Transmittance & Absorbance of films
- Quantification of organic compound



BET Surface Area and Porosity Analyzer

Make:	Microtrac MRB
Model:	BELSORP MAX II
Specifications :	Measurement method: Volumetric method + AFSM™ Pre-treatment/de-gassing system: 50 - 450 °C Adsorptive gas: N ₂ , Ar, Kr, CO ₂ , H ₂ , O ₂ , CH ₄ , NH ₃ , Butane Measurement range (specific surface): 0.01 m ₂ /g and above Pore size distribution (Diameter): 0.35 - 500 nm Analysis programme: NLDFT for pore size distribution/ Adsorption/desorption isotherms/ Specific surface area Analysis software: BELMaster™ 7 Solid/porous/powder samples

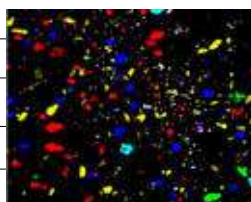


About Equipment: The BELSORP MAX II is a versatile instrument which measures specific surface area/ pore size distribution, adsorption/desorption isotherms, pore size (BJH method) and pore volume of the sample.

- Applications:**
- Heterogeneous Catalysis
 - Surface Kinetics

Micro-Raman Spectroscopy

Make:	Renishaw
Model:	InVia Raman Microscope
Specifications :	Raman Spectral Analysis using Visible Excitation at 532 and 785 nm Laser: DPSS 532 nm laser, 100 mW, with External mounting on a kinematic laser baseplate High Power Near IR Diode Laser, 300 mW at 785 nm (air cooled) Integral narrow bandpass filter with external mounting on laser kinematic baseplate



About Equipment: InVia Raman Microscope comprises a research-grade microscope coupled to a high-performance Raman spectrometer. It delivers outstanding performance – high signal throughput, combined with high spectral resolution and stability—giving reliable results, for even the most challenging measurements

- Applications:**
- Qualitative Molecular Analysis
 - Quantitative Molecular Analysis
 - Investigating Pharmaceutical Compounds
 - Polymer Characterization

Inductively Coupled Plasma – Mass Spectrometry (ICP-MS)

Make:	ThermoFisher Scientific
Model:	iCAP RQ Quadrupole ICP-MS (ICAPQNOVAS)
Specifications :	Digital, solid-state RF-generator with dynamic frequency impedance matching to the plasma at ~27 MHz Full PC control gives continuously variable power from 380 W to 1600 W. One 1000 mL/min additional MFC controller Borosilicate glass concentric nebulizer with 400µL/min flow rate at default peristaltic pump rate Peltier cooling (-10 °C to +20 °C) of the quartz cyclonic spray chamber



About Equipment:	ICAPQNOVAS atomizes the sample and creates atomic and small polyatomic ions, which are then detected. It is versatile and used for its ability to detect metals in liquid samples at very low concentrations with dynamic range of 10 ⁹ cps. It can detect different isotopes of the same element, which makes it a versatile tool in isotopic labeling.
Applications:	<ul style="list-style-type: none"> • Metal Concentration Detection Close-coupled, compact, low pulsation, 12 rollers, 4 <ul style="list-style-type: none"> • Elemental Analysis channel mini-pump with metal-free rollers and bubble sensor <ul style="list-style-type: none"> • Wastewater Treatment • Catalysis

Ultra High-Performance Liquid Chromatography

Make:	ThermoFisher Scientific Model Thermo scientific Vanquish System
Model:	InVia Raman Microscope
Specifications :	Pump – Quaternary Pump F Detector – (a) Variable Wavelength Detector F, (b) Fluorescence Detector F, (c) Refractive index Detector (RefractoMax 520) Column – COSMOSIL C -MS-II (4.6 mm I.D. x 250 mm) 18 Data Processor - Chromeleon 7.2
About Equipment:	The Vanquish UHPLC system is an integrated, fully biocompatible, state-of-the-art binary UHPLC system with ultra-low gradient delay volume, unrivaled performance for high resolution and high-throughput LC applications Applications: Separation of Naturally Occurring Compounds Dissolution Studies Pollutant monitoring in liquid phase Quantitative Analysis
Applications:	<ul style="list-style-type: none"> • Qualitative Molecular Analysis • Quantitative Molecular Analysis • Investigating Pharmaceutical Compounds • Polymer Characterization



Gas Chromatography

Make:	Thermo Scientific
Model:	Thermo Scientific TRACE 1110
Specifications :	Detector- Flame Ionisation Detector (FID) Column- Capillary Column (TG- 5MS, 30m x 0.25mm, 0.25um) Sr No. 1558094
About Equipment:	The TRACE 1110 GC is a new multi-channel, high performance, flexible and robust gas chromatograph offering the largest number of injectors and detectors running simultaneously on the same GD. This capability allows users to efficiently switch between different applications on the same GC.
Applications:	<ul style="list-style-type: none"> • Analysis of food additives, components of flavour and aroma • Quality control, companies that produce cars, chemicals and pharmaceuticals • Analysis of meteorites and natural products



Isothermal Titration Calorimetry

Make:	TA Instruments
Model:	Affinity ITC Low Volume
Specifications :	Cell cleaning station, injection syringe assembly, Cell fill/wash needle, degassing station (110/230V AC; 50/60 Hz)



About Equipment:	The Affinity ITS is designed for the most challenging life science laboratory environments that require high sensitivity, high productivity and the most advanced ITC technologies. The Affinity is used in gene therapy applications for characterising serotype and drug loading in AA Vs and LNPs as well as target and off-target binding interactions.
Applications:	<ul style="list-style-type: none"> • Protein-protein interactions • Protein-DNA/RNA interactions • Protein-small molecule interactions • Enzyme kinetics



Gel Electrophoresis

Make:	Bio-Rad
Model:	Gel Electrophoresis- Bio-Rad
Specifications :	Mini-Protein Electrophoresis system PowerPac HV power supplies, Western Blotting, ChemiDoc MP Imaging System
About Equipment:	Bio-Rad's gel electrophoresis and blotting is fully reflected in a wide choice of instruments, precast gels and reagents for protein and DNA analysis.
Applications:	<ul style="list-style-type: none"> • Separation of DNA fragments for DNA fingerprinting • Analyze results of polymerase chain reaction • Protein electrophoresis analysing the proteins mainly in blood serum.



7.4 HOSTELS



Preamble

ICT, Marathwada, has rented residential flats which are currently used as hostel for integrated M.Tech. students. This facility will be continued to be used as Boys Hostel. In the same premises in separate wing Girls Hostel arrangement is made. At present these Hostels accommodate 70 boys and 44 Girl students. Guest House facility and Wardens residence is also located in the same building.

Wardens manage all the affairs of the hostel and are assisted by hostel office staff. Laundry facilities and housekeeping is also arranged. Separate Woman Security Guard is also appointed.

Process of Allocation of Hostels

1. Hostel No. 1 is allotted to Girls from all years of M.Tech Integrated course. Girls from other courses will be accommodated subject to vacancy. Hostel No. 2 is for Boys mainly from the First Year M.Tech Integrated course. All the hostels are unaided and maintained by the Institute.
2. Bus Conveyance is arranged from Hostel No. 1 & 2 (Bus for all students) to reach ICT, MARJ, Campus which is about 3.5 kms away.
3. Only bonafide full time students of ICT, MARJ are entitled for hostel admission.



- Admission will be offered on merit basis. Preference will always be given to out-station students who come from places beyond the limits of Jalna. As a proof of stay beyond the limits of Jalna, they are required to upload scanned copies of ration card/ Aadhar card and school-leaving certificate. Any false representation in this regard will be strictly dealt with.
- Student who have taken admission to ICT can register on-line through ICT log in portal (www.ictmumbai.co.in). Students need to upload a residence proof, a medical certificate from your family doctor (with clearly mentioning about chronic health problem or allergy if any). Hostel authority will approve the form and will give call for admission depending upon the availability of seats.
- Students must confirm the hostel admission by paying the required fee to ICT, MARJ Hostel account.
- The Warden of the respective hostel has all the rights to change/transfer a student from one room to other within the hostel for convenience of the administration. Also, every year the student may be shifted from the accommodation provided in earlier year.
- In case of the year-drop, the candidate will have no claim for hostel accommodation and will have to vacate the hostel. Readmission for such student on clearing the year-drop will not be guaranteed.

Hostel Fees:

Accommodation fees:

Hostel	Category	Type of Accommodation	Hostel Capacity	Annual Fees, Rs.**
Hostel no. 1	Girls	Double Seated & More	48*	30,000
Hostel no. 2	Boys	Double Seated & More	60**	30,000
Hostel no. 3	Boys	Single/Double Seated	92***	30,000

Note: If social distancing norms imposed by the govt are applicable-number of seats may get reduced.

Accommodation fees should be paid online following the procedure detailed on www.ictmumbai.co.in

* Flexible, can be increased if needed, for all girl students.

** Flexible, can be increased if needed, all first year Int. M.Tech. boys students who are from outside Jalna will be accommodated.

*** For senior students (boys).

++ M.Tech integrated course structure is different, there are no long vacations, there are 4 months ipt trainings every other trimester and flat annual fees will be charged for all students.

Hostel Messes

It is desirable for all hostel students to join the respective Hostel Mess. Typical mess charge includes breakfast and two meals a day. All the mess members are required to pay to ICT, MARJ Hostel Account Rs. 20,000/- towards advance mess charges. Mess deposit of Rs. 5,000/- is required to be paid at the time of joining of Mess which will be refunded (part) only if annual Mess expenditure is less than Rs. 25,000.

Hostel Management

Wardens at ICT hostels

Hostel No.	Warden
1.	Dr. A. H. Bari Email: ah.bari@staffmarj.ictmumbai.edu.in Warden to Hostel No. 2 & 3
2.	Dr. Joyita Sarkar Email: j.sarkar@marj.ictmumbai.edu.in Warden Hostel no. 1
Hostel Office	For details, please contact Mr Rahul Vyas (I/C Hostel Maintenance) Mr Sainath Alsatwar (Mess related matters)

General

- Limited guest house facility is available at Hostel No. 1 & 2 only for parents who wish to meet their wards studying at ICT on payment basis.
- Hostels are equipped with mess, T.V. room and essentials.
- All students are covered under accident policy of the Institute.

Discipline and Decorum

1. Smoking and consumption of alcohol is strictly prohibited in hostels and public places in the entire campus of ICT. A strict disciplinary action will be taken against the student involved in misdemeanor and illegal activities.
2. All the students have to report in their respective hostel premises by 8:00 pm and should be in their respective rooms by 10:00 pm.
3. Action against ragging: Maharashtra Prohibition of Ragging Act 1999 is in effect from 15th May 1999. (See details later from UGC in this regard). Any case of ragging should be reported by the victim in writing within three days of the incident to the respective warden with copies marked to: Associate Dean (assodean.ind@marj.ictmumbai.edu.in) and Director (director@marj.ictmumbai.edu.in).
4. Detailed rules and regulations will be provided during admission.

7.4 INDUSTRIAL TRAINING

ICT-Marathawada, Jalna Campus

I-M. Tech students of ICT-Marathawada, Jalna Campus were placed for 4-month industrial training in different companies. The companies are as follows:

	List Of Industries for IPT of ICT Jalna Students	Place
1	Aarti Drugs Ltd	Tarapur
2	Abbott India Ltd	BKC, Mumbai
3	Abhay Cotex Pvt Ltd Jalna	Jalna
4	ACG Associated Capsules Ltd	Shirval Pune
5	Adherence Techno Products Pvt Ltd Aurangabad	Aurangabad
6	Adonia Cosmetics Pvt Ltd Atgaon	Shahapur Thane
7	Ajanta Pharmaceuticals Ltd Aurangabad	Aurangabad
8	Akzo Nobel Ltd	New Mumbai
9	Alkem Laboratories Ltd	Sikkim
10	Alkyl Amines Ltd Kurkumbh	Pune
11	Amogh Chemicals Pvt Ltd	Mumbai
12	AMUL Milk Union Ltd Anand	Anand
13	Approcopp Engineering Pvt Ltd Jalna	Jalna
14	ARHA Foods	Nasik
15	Asian Azoles Pvt Ltd	Vapi
16	Atra Pharmaceuticals Pvt Ltd Waluj	Aurangabad
17	Aurochem Pvt Ltd	Palghar
18	Baramati Agro Ltd	Baramati
19	BASF Ltd	Dahej Gujarat
20	Bhabha Institute Of Atomic Research (BARC)	Mumbai
21	Bhagalaxmi Steels Pvt Ltd Jalna	Jalna
22	Bhakti Solvex Pvt Ltd Jalna	Jalna
23	Bharat Petroleum Corp Ltd Bina Refinery	Bina
24	Blast Carboblocks Pvt Ltd Vashi	New Mumbai
25	Bosch Ltd	Nasik
26	BPCL Ltd Mumbai	Mumbai
27	Britannia Industries Ltd	Ranjangaon
28	Burlyfield Foods	Aurangabad
29	Central Institute of Mining & Fuel Research	Dhanbad
30	Century Paper & Pulp Ltd	Nainital
31	Century Rayon Ltd Kalyan	Kalyan



	List Of Industries for IPT of ICT Jalna Students	Place
32	Chandrapur Super Thermal Power Plant	Chandrapur
33	Chemdist Membrane Solutions	Bhosari Pune
34	Chemdist Process Solutions	Pune
35	Chemvera Speciality Chemicals Pvt Ltd	Mumbai
36	Chitale Bandhu Mithaiwale	Shirwal Pune
37	CIPLA Ltd	Patalganga Rasayani
38	Clarion Drugs Ltd	Nagpur
39	Clean Chem Laboratories	Mumbai
40	Concept Pharmaceuticals Pvt Ltd Aurangabad	Aurangabad
41	Cream N Joy Ice-Creams	Aurangabad
42	CSIR-Institute of Microbial Technology	Chandigarh
43	Cyanohealth Pvt Ltd	Mumbai
44	Deepak Fertilizers & Petrochemicals Ltd	Taloja
45	Deepak Nitrite Ltd	Vadodara
46	DIAT-DRDO	Pune
47	Dinshaw Foods Pvt Ltd Nagpur	Nagpur
48	Divya SRJ Foods Jalna	Jalna
49	Dow Chemicals Research Centre	New Mumbai
50	Dr B A Ambedkar Sugar Co-Op.Ltd Osmanabad	Osmanabad
51	Embio Research Pvt Ltd	Panvel Mumbai
52	Enaltech Labs Pvt Ltd	Ambernath
53	Endress+Hauser Ltd	Waluj Aurangabad
54	Energy Efficiency Services Ltd	Mumbai
55	Engineers India Ltd	New Delhi
56	Envirocare Laboartories Ltd Thane	Thane
57	Evergreen Technologies Pvt Ltd	Mumbai
58	Exotic Fruits Pvt Ltd	Krishnagiri T.N.
59	FDC India Ltd	Roha
60	Fit-Shit Health Solutions	Mumbai
61	Food Innovation Research	New Delhi
62	Fragrances & Flavours Development Centre	Lucknow
63	Garware Polysters Ltd Aurangabad	Aurangabad
64	Gauri Agro Tech Pvt Ltd Jalna	Jalna
65	Gharda Chemicals Ltd	Chiplun
66	Glatt Systems Pvt Ltd Mumbai	Mumbai
67	Glenmark Pharamaceuticals Ltd R & D Division	Navi Mumbai
68	Glenmark Pharamaceuticals Ltd Nasik	Nasik
69	Godrej Industries Ltd Ambernath	Ambernath
70	Godrej Industries Ltd Mumbai / Valia	Mumbai
71	Gokul Dairy	Kolhapur
72	Gramercy Trade Ind Pvt Ltd Kurla	Mumbai
73	Grauer & Weil Ltd	Vapi
74	Gujarat Flurochemicals Ltd	Dahej Gujarat
75	Haffkine Ajintha Pharma Ltd	Jalgaon
76	Haffkine Bio-Pharma Pvt Ltd Mumbai	Mumbai
77	Haldiram Foods	Nagpur

	List Of Industries for IPT of ICT Jalna Students	Place
123	Mother Dairy Ltd	New Delhi
124	Mylan Laboratories Ltd Aurangabad	Aurangabad
125	Nutriti Ingredients Pvt Ltd	New Mumbai
126	Omech Components Shendra	Aurangabad
127	ONGC Regional Geoscience Laboratory	Panvel Mumbai
128	OPAL Dahej Gujarat	Dahej Gujarat
129	Orthocrafts Innovations Pvt Ltd	Pune
130	Parle Biscuits & Confectioneries	Nasik
131	Patanjali Ayurved , Haridwar	Haridwar
132	Pharmaglance Consultancy LLP	Pune
133	Pidilite Industries Ltd	Dahej Gujarat
134	Pooja Rotomake Pvt Ltd	Jalna
135	PPG Asian Paints Limited Navi Mumbai	Mumbai
136	Pratap Organics Ltd	New Mumbai
137	R J Foods (Parle Biscuits)	Jalgaon
138	Radico NV Distilleries Ltd	Shendra Aurangabad
139	Rajuri Steels Pvt Ltd Jalna	Jalna
140	Raptokoss Brett Ltd	Thane
141	Rathi Steel & Metal Pvt Ltd Jalna	Jalna
142	RCF Ltd Chembur Mumbai	Mumbai
143	RCF Ltd Thal , Alibaug	Alibag Raigad
144	Reliance Industries Ltd	Jamnagar
145	Reliance Industries Ltd	Hazira
146	Relinace Green Energy Ltd	New Mumbai
147	Rena Sugar Ltd	Renapur
148	Rich Products & Solutions Pvt Ltd	Pune
149	Roopam Steels Pvt Ltd Jalna	Jalna
150	Rossari Bio Tech Ltd	Mumbai
151	S For S Technology Sanpada Navi Mumbai	Mumbai
152	Sanjay Techno Group Aurangabad	Aurangabad
153	SASMIRA Worli Mumbai	Mumbai
154	Savera Pharamaceuticals Pvt Ltd	Waluj Aurangabad
155	Serum Institute Ltd	Pune
156	Set on Site Transformers Waluj	Aurangabad
157	Sheela Transformer Industries Jalna	Jalna
158	Shree Tubes Pvt Ltd Waluj, Aurangabad	Aurangabad
159	Shreya Pharamaceuticals Waluj Aurangabad	Aurangabad
160	Shreyam Power & Steel Ltd	Gandhidham
161	Smoothline Cables Jalna.	Jalna
162	Snackible Pvt Ltd	Kurla Mumbai
163	Snowtech Equipments Pvt Ltd	Mumbai
164	Solar Industries Ltd	Nagpur
165	Solar Industries Ltd	Nagpur
166	Songwong Speciality Chemicals Pvt Ltd Ankaleshwar	Ankaleshwar
167	Suhans Activated Alloys Pvt Ltd	Jalgaon
168	Sula Wines	Nasik

	List Of Industries for IPT of ICT Jalna Students	Place
169	Sun Pharmaceuticals Ltd	Dewas M.P.
170	Sunita Hydrocolloids Pvt Ltd	Jodhpur
171	Tastybite Eatables Ltd	Pune
172	TCS -Tata Research Development & Design Centre	Pune
173	Technip Energies Ltd Powai	Mumbai
174	Thakurji Solvex Pvt Ltd Jalna	Jalna
175	Thermax Limited Pune	Pune
176	Transpek Industry Ltd	Vadodara
177	Transpek Silox Pvt Ltd	Vadodara
178	Trilok Foods Satara	Satara
179	Tulsi Paints Pvt Ltd Nanded	Nanded
180	UPL Ltd Jhagadiya Ankaleshwar	Ankaleshwar
181	UPL Ltd Kalol Gujarat	Kalol Gujrat
182	Vadilal Industries Ltd	Gandhinagar
183	Vaidehi Masale Industries Jalna	Jalna
184	Vanvid Chemicals Pvt Ltd	Chiplun
185	Vasudhara Dairy (AMUL)	Nagpur
186	Vega Chemicals Pvt Ltd Jalgaon	Jalgaon
187	Vibfast Pigments Pvt Ltd Ahmedabad	Ahmedabad
188	Vinati Organics Ltd	Chiplun
189	Vincitore Technologies Pvt Ltd	Pune
190	Vinodrai Engineering Pvt Ltd Jalna	Jalna
191	Warna Dudh Sangh	Warnanagar
192	Wockhardt Pharmaceuticals Ltd Aurangabad	Aurangabad
193	Zelos Foods	Pune
194	Gharda Chemicals Ltd Dombiwali	Mumbai
195	Gujarat Heavy Chemicals Ltd Sutarpada	Gujarat

7.5 PLACEMENT

7.5.1 HIGHER STUDIES

Sr. No.	Name of Student	Admits received	Admit accepted with full fellowship for PhD
1	Harsh R Darji	University of Wisconsin Madison	University of Wisconsin Madison
		University of Minnesota - Twin Cities	
2	Farhan Shaikh	University of Florida	Johns Hopkins University
		Texas A&M University	
		University of Colorado Boulder	
		University of Pittsburgh	
		Johns Hopkins University	
3	Krutarth Pandit	Iowa State University	Ohio State University
		Ohio State University	
4	Ali Asger	Penn State University	Carnegie Mellon University
		Carnegie Mellon University	
		Cornell University	



Sr. No.	Name of Student	Admits received	Admit accepted with full fellowship for PhD
5	Ayush Deore	Georgia Institute of Technology	Georgia Institute of Technology
		Ohio State University	
		Arizona State University	
		State University of New York, Buffalo	
6	Urvi Parlikar	University of Colorado Boulder	University of Colorado Boulder
		State University of New York, Buffalo	
7	Vishnu Pradeep S	Columbia University	Columbia University
		TU Delft	
		Johns Hopkins University	
		University of Southern California	
		State University of New York	
8	Parth Khandagale	University at Buffalo	New York University

Sr.	Name of Student	Company name	Role	Location
1.	Smith Patil	Transparency Market Research	Research Associate	Pune
2.	Dhananjay Nagre	Future Market Insights	Associate Consultant Level -1	Pune
3.	Prajwal Jadhav	Future Market Insights	Associate Consultant Level -1	Pune
4.	Utkarsh Patodi	Future Market Insights	Associate Consultant Level -1	Pune
5.	Akshat Bedmutha	Future Market Insights	Associate Consultant Level -1	Pune
6.	Vaidehi Patil	Freyr Software Services Pvt Ltd	Trainee - Regulatory operations	Hyderabad
7.	Janhavi Dhumal	Freyr Software Services Pvt Ltd	Trainee - Cosmetics	Hyderabad
8.	Mrudav Raval	Keva Flavours & fragrances Pvt. Ltd.	Sales	Not known
9.	Prasad Lakade	Keva Flavours & fragrances Pvt. Ltd.	Sales	Not known
10.	Hiteshree Sarode	Keva Flavours & fragrances Pvt. Ltd.	R&D	Not known
11.	Piyush Dhage	Stellarix Jaipur	Associate Operations Cons.- Advisory	Jaipur
12.	Lekhranj Mahajan	Tata Consulting Engineers Ltd		Pune
13.	Adwait Sawant	Tata Consulting Engineers Ltd		Pune
14.	Susmit Nikam	Baxter Pharmaceuticals India Private Limited		Ahmadabad
15.	Shradhha Kamble	Kimberly Clark India Private Limited		Mumbai
16.	Mrinmayee Warode	Intas Pharmaceuticals Private Limited		Ahmadabad
17.	Kikkara Pooja Rao	Par Pharmaceutical An ENDO International Company		Mumbai
18.	Shilpa Bharat Sonawane	Par Pharmaceutical An ENDO International Company		Mumbai
19.	Rajesh Dugane	IMCD		Mumbai
20.	Chetan Ramesh Gawali	National Institute of Pharmaceutical Education and Research		Ahmadabad
21.	Rajashree Subhas Shinde	Biocon Biologics	GRA	Bangaluru

Sr.	Name of Student	Company name	Role	Location
22.	Pallavi Appasaheb Kamandar	Biocon Biologics	QC Insulin	Bengaluru
23.	Sanjana Shamsundar Ghongane	Biocon Biologics	MSAT Biosimilars	Bengaluru
24.	Rahul Tukaram Haramkar	Freyr Solutions	CSRA	Hydrabad
25.	Sharvari Satish Deshpande	Freyr Solutions	Regulatory Affairs	Hydrabad
26.	Deblina Debasish Bhowmik	Macleoids Pharamaceuticals LTD	AMD API	Mumbai
27.	Vaidehi Shukla	Mordor Intelligence, Hyderabad		Hyderabad
28.	Pooja Mulge	Mordor Intelligence, Hyderabad		Hyderabad
29.	Mahpara Khanam	Mordor Intelligence, Hyderabad		Hyderabad
30.	Jaheer Kazi	Mordor Intelligence, Hyderabad		Hyderabad
31.	Srishti Dhane	AIMCHEM,Mumbai		Mumbai
32.	akshay chava	Mapro Pvt Ltd		Wai, Mahabaleshwar
33.	suresh kolte	Mapro Pvt Ltd		Wai, Mahabaleshwar
34.	Krushna Alnure	S4S Technologies, sambhaji N		Sambhaji Nagar
35.	Sayali Deshmane	vyankatesh agro processing co		Phaltan
36.	nitin garud	dukes food pvt ltd, Hyderabad		Hyderabad
37.	Kevin Adams Ebenezer	Saint-Gobain	Professional Research Engineer	Mumbai
38.	Athira G K	HMEL (HPCL- Mittal Energy Limited Singapore	Technical Trainee	Noida UP
39.	Sakshi Singh	HMEL (HPCL- Mittal Energy Limited Singapore)	Technical Trainee	Noida UP

7.6 ANTI-RAGGING COMMITTEE & SQUAD MEMBERS

Anti-Ragging Committee (ICT Marathwada Campus):

Associate Dean Industry	Mr. Sharad G. Lahoti
Head Warden	Dr. Parag R. Nemade
Ladies Hostel Warden	Dr. Joyita Sarkar
Assistant Professor	Dr. Manojkumar Jadhao
Counsellor	Ms. Savita Satpute
Non-Teaching	Mr. Nagesh N. Alsatwar
Student	Mr. Unmesh Thorve
Student	Mr. Rehan Shaikh
Student	Ms. Shreya Bhardwaj
Student	Ms. Ketaki Patil



Anti-Ragging Squad Members (ICT Marathwada Campus):

Associate Dean	Shri. Sharad Lahoti
Professor	Dr. Girish M. Joshi
Assistant Professor	Dr. Manoj B. Gawande
Ladies Hostel Warden	Dr. Joyita Sarkar
Data Executive	Shri. Sandip Pawar

Detailed rules and regulations will be provided during admission.

Student Achievements

- Over 30 plus students research publications in international peer-reviewed journals and an Indian patent since 2018.
- International Internships through MITACS (Canada), METI (Japan), Vishwaniketkan UG Fellowship (Demark) etc.
- 200+ Courses completed via various platforms like Coursera, edX, etc.
- Internships in MNCs like Mondelez, Amul, IOCL, Lupin, etc.
- Research Internships at Institutions like BARC, CSIR Labs, DIAT, etc.
- Winners in various National Level Competitions like SIH, Mondelez Mavins.

Campus Placements Recruiters

Highest CTC **8.5 LPA**
Average CTC **6.0 LPA**

University admits for higher studies

Our Training Partners



Student Activities

Extracurricular activities like Theme days were celebrated in campus

- Bollywood day
- Mismatch day
- No bag day
- Group day





Nutrition Fiesta

Lokmat Times



Students show posters at the inaugural function of the Nutrition Fiesta at ICT in Jalna on Friday. Director of ICT Uday Annappure, industrialist Ashish Mantri and teachers are also seen.

Nutrition Fiesta at ICT

Jalna, Sept 5: Jalna-based Institute of Chemical Technology (ICT) Marathwada has organised 'Nutrition Fiesta 2.0', a national nutrition month celebration from September 3-27. Director of ICT Uday Annappure inaugurated the event in Jalna on Saturday. During the celebration, various programmes including diet clinic, nutrition car-

nival, nutrition awareness, poster making, nutri master, master chef, and flavour reel have been organised. Director of Shri Hari Nutrition Pvt Ltd, Ashish Mantri, Bhavesh Patel of Vikram Tea Pvt Ltd, Manoj Peety of Thakurji Solvex Pvt Ltd, Anuj Kabra of Matrix Life Science Ltd, and Uday Naik of Aromax Flavours and Fragrances Pvt were

chief guests. Sharad Lahoti, Dr Sandhya Shiwale, Dr Navinath Hatwate, Sameera Naz Malik, Dr Nagven Meshram, Dr Kapil Sagolikar and Dr Sandeep Bhairat were present at the inaugural function. The faculty heads Dr Yogesh Gat, Abhinav Tidke, Nikhil Munde are making efforts to ensure the success of the event.

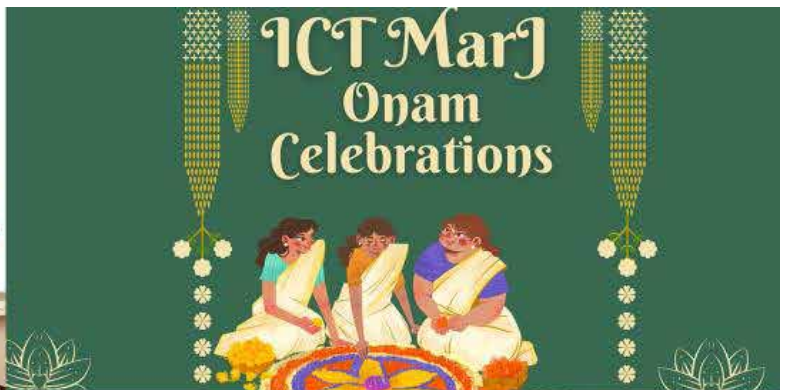
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ICT MARJ



BLOOD DONATION DRIVE



SWARTARANG



Ganesh Utsav





Anti-Ragging Laws and Notifications of UGC

REGULATIONS ON CURBING THE MENACE OF RAGGING IN HIGHER EDUCATION INSTITUTIONS, 2009

NO. F 1-16/2007 (CPP-II)

April, 2009

In exercise of the powers conferred by Clause (g) of Sub-Section (1) of Section 26 of the University Grants Commission Act, 1956, the University Grants Commission hereby makes the following Regulations, namely-

8.1 TITLE, COMMENCEMENT AND APPLICABILITY

- 8.1.1. These regulations shall be called the “UGC Regulations on Curbing the Menace of Ragging in Higher Educational Institutions, 2009”.
- 8.1.2. They shall come into force with immediate effect.
- 8.1.3. They shall apply to all the universities established or incorporated by or under a Central Act, a Provincial Act or a State Act, to all institutions deemed to be university under Section 3 of the UGC Act, 1956, to all other higher educational institutions, including the departments, constituent units and all the premises (academic, residential, sports, canteen, etc) of such universities, deemed universities and other higher educational institutions, whether located within the campus or outside, and to all means of transportation of students whether public or private.

8.2 OBJECTIVE

To root out ragging in all its forms from universities, colleges and other educational institutions in the country by prohibiting it by law, preventing its occurrence by following the provisions of these Regulations and punishing those who indulge in ragging as provided for in these Regulations and the appropriate law in force.

8.3 DEFINITIONS FOR THE PURPOSES OF THESE REGULATIONS

- 8.3.1 “College” means any institution, whether known as such or by any other name, which provides for a programme of study beyond 12 years of schooling for obtaining qualification from a university and which, in accordance with the rules and regulations of such university, is recognized as competent to provide for such programme of study and present students undergoing such programme of study for the examination for the award of such qualification.
- 8.3.2 “Head of the institution” means the ‘Vice-Chancellor’ in case of a university/deemed to be university, ‘Principal’ in case of a college, ‘Director’ in case of an institute.
- 8.3.3 “Institution” means a higher educational institution (HEI), like a university, a college, an institute, etc. imparting higher education beyond 12 years of schooling leading to a degree (graduate, postgraduate and/or higher level) and/or to a university diploma.
- 8.3.4 “Ragging” means the following:
Any conduct whether by words spoken or written or by an act which has the effect of teasing, treating or handling with rudeness any other student, indulging in rowdy or undisciplined activities which causes or is likely to cause annoyance, hardship or psychological harm or to raise fear or apprehension thereof in a fresher or a junior student or asking the students to do any act or perform something which such student will not in the ordinary course and which has the effect of causing or generating a sense of shame or embarrassment so as to adversely affect the physique or psyche of a fresher or a junior student.

- 8.3.5 “Statutory/Regulatory body” means a body so constituted by a Central/ State Government legislation for setting and maintaining standards in the relevant areas of higher education, such as the All India Council for Technical Education (AICTE), the Bar Council of India (BCI), the Dental Council of India (DCI), the Distance Education Council (DEC), the Indian Council of Agricultural Research (ICAR), the Indian Nursing Council (INC), the Medical Council of India (MCI), the National Council for Teacher Education (NCTE), the Pharmacy Council of India (PCI), etc. and the State Higher Education Councils.
- 8.3.6 “University” means a university established or incorporated by or under a Central Act, a Provincial Act or a State Act, an institution deemed to be university under Section 3 of the UGC Act, 1956, or an institution specially empowered by an Act of Parliament to confer or grant degrees.

8.4. PUNISHABLE INGREDIENTS OF RAGGING

Abetment to ragging;
Criminal conspiracy to ragging;
Unlawful assembly and rioting while ragging; Public nuisance created during ragging;
Violation of decency and morals through ragging; Injury to body, causing hurt or grievous hurt; Wrongful restraint;
Wrongful confinement; Use of criminal force;
Assault as well as sexual offences or unnatural offences; Extortion;
Criminal trespass; Offences against property; Criminal intimidation;
Attempts to commit any or all of the above mentioned offences against the victim(s);
Physical or psychological humiliation;
All other offences following from the definition of “Ragging”.

8.5 MEASURES FOR PROHIBITION OF RAGGING AT THE INSTITUTION LEVEL

- 8.5.1 The institution shall strictly observe the provisions of the Act of the Central Government and the State Governments, if any, or if enacted, considering ragging as a cognizable offence under the law on a par with rape and other atrocities against women and ill-treatment of persons belonging to the SC/ST, and prohibiting ragging in all its forms in all institutions.
- 8.5.2 Ragging in all its forms shall be totally banned in the entire institution, including its departments, constituent units, all its premises (academic, residential, sports, canteen, etc.) whether located within the campus or outside and in all means of transportation of students whether public or private.
- 8.5.3 The institution shall take strict action against those found guilty of ragging and/or of abetting ragging.

8.6 MEASURES FOR PREVENTION OF RAGGING AT THE INSTITUTION LEVEL

8.6.1 BEFORE ADMISSIONS:

- 8.6.1.1 The advertisement for admissions shall clearly mention that ragging is totally banned in the institution, and anyone found guilty of ragging and/or abetting ragging is liable to be punished appropriately (for punishments, ref. section 8 below).
- 8.6.1.2 The brochure of admission/instruction booklet for candidates shall print in block letters these Regulations in full (including Annexures).
- 8.6.1.3 The ‘Prospectus’ and other admission related documents shall incorporate all directions of the Supreme Court and /or the Central or State Governments as applicable, so that

the candidates and their parents/ guardians are sensitized in respect of the prohibition and consequences of ragging. If the institution is an affiliating university, it shall make it mandatory for the institutions under it to compulsorily incorporate such information in their 'Prospectus'.

- 8.6.1.4 The application form for admission/ enrollment shall have a printed undertaking, preferably both in English/Hindi and in one of the regional languages known to the institution and the applicant (English, Hindi and Marathi versions appended), to be filled up and signed by the candidate to the effect that he/she is aware of the law regarding prohibition of ragging as well as the punishments, and to the effect that he/she has not been expelled and/or debarred from admission by any institution and that he/she, if found guilty of the offence of ragging and/or abetting ragging, is liable to be punished appropriately.
- 8.6.1.5 The application form shall also contain a printed undertaking, preferably both in English/Hindi and in one of the regional languages known to the institution and the parent/guardian (English Hindi and Marathi versions appended), to be signed by the parent/guardian of the applicant to the effect that he/ she is also aware of the law in this regard and agrees to abide by the punishment meted out to his/ her ward in case the latter is found guilty of ragging and/or abetting ragging.
- 8.6.1.6 The application for admission shall be accompanied by a document in the form of the School Leaving Certificate/Transfer Certificate/ Migration Certificate/ Character Certificate which shall include a report on the behavioral pattern of the applicant, so that the institution can thereafter keep intense watch upon a student who has a negative entry in this regard.
- 8.6.1.7 A student seeking admission to the hostel shall have to submit additional undertaking in the form of 6.1.4 (both Parts) along with his/ her application for hostel accommodation
- 8.6.1.8 At the commencement of the academic session the Head of the Institution shall convene and address a meeting of various functionaries/agencies, like Hostel Wardens, representatives of students, parents/ guardians, faculty, district administration including police, to discuss the measures to be taken to prevent ragging in the Institution and steps to be taken to identify the offenders and punish them suitably.
- 8.6.1.9 To make the community at large and the students in particular aware of the dehumanizing effect of ragging, and the approach of the institution towards those indulging in ragging, big posters (preferably multicolored with different colours for the provisions of law, punishments, etc.) shall be prominently displayed on all Notice Boards of all departments, hostels and other buildings as well as at vulnerable places. Some of such posters shall be of permanent nature in certain vulnerable places.
- 8.6.1.10 The institution shall request the media to give adequate publicity to the law prohibiting ragging and the negative aspects of ragging and the institution's resolve to ban ragging and punish those found guilty without fear or favour.
- 8.6.1.11 The institution shall identify, properly illuminate and man all vulnerable locations.
- 8.6.1.12 The institution shall tighten security in its premises, especially at the vulnerable places. If necessary, intense policing shall be resorted to at such points at odd hours during the early months of the academic session.
- 8.6.1.13 The institution shall utilize the vacation period before the start of the new academic year to launch wide publicity campaign against ragging through posters, leaflets, seminars, street plays, etc.
- 8.6.1.14 The faculties/ departments/ units of the institution shall have induction arrangements (including those which anticipate, identify and plan to meet any special needs of any specific section of students) in place well in advance of the beginning of the academic year with a clear sense of the main aims and objectives of the induction process.

8.6.2 ON ADMISSION:

- 8.6.2.1 Every fresh student admitted to the institution shall be given a printed leaflet detailing when and to whom he/she has to turn to for help and guidance for various purposes (including Wardens, Head of the institution, members of the anti-ragging committees, relevant district and police authorities), addresses and telephone numbers of such persons/authorities, etc., so that the fresher need not look up to the seniors for help in such matters and get indebted to them and start doing things, right or wrong, at their behest. Such a step will reduce the freshers dependence on their seniors.
- 8.6.2.2 The institution through the leaflet mentioned above shall explain to the new entrants the arrangements for their induction and orientation which promote efficient and effective means of integrating them fully as students.
- 8.6.2.3 The leaflet mentioned above shall also inform the freshers about their rights as bona fide students of the institution and clearly instructing them that they should desist from doing anything against their will even if ordered by the seniors, and that they have nothing to fear as the institution cares for them and shall not tolerate any atrocities against them.
- 8.6.2.4 The leaflet mentioned above shall contain a calendar of events and activities laid down by the institution to facilitate and complement familiarization of freshers with the academic environment of the institution.
- 8.6.2.5 The institution shall also organize joint sensitization programmes of 'freshers' and seniors.
- 8.6.2.6 Freshers shall be encouraged to report incidents of ragging, either as victims, or even as witnesses.

8.6.3 AT THE END OF THE ACADEMIC YEAR:

- 8.6.3.1 At the end of every academic year the Vice-Chancellor/ Dean of Students Welfare/ Director/ Principal shall send a letter to the parents/ guardians of the students who are completing the first year informing them about the law regarding ragging and the punishments, and appealing to them to impress upon their wards to desist from indulging in ragging when they come back at the beginning of the next academic session.
- 8.6.3.2 At the end of every academic year the institution shall form a 'Mentoring Cell' consisting of Mentors for the succeeding academic year. There shall be as many levels or tiers of Mentors as the number of batches in the institution, at the rate of 1 Mentor for 6 freshers and 1 Mentor of a higher level for 6 Mentors of the lower level.

8.6.4 SETTING UP OF COMMITTEES AND THEIR FUNCTIONS:

- 8.6.4.1 The Anti-Ragging Committee:- The Anti-Ragging Committee shall be headed by the Head of the institution and shall consist of representatives of faculty members, parents, students belonging to the freshers' category as well as seniors and non-teaching staff. It shall monitor the anti-ragging activities in the institution, consider the recommendations of the Anti-Ragging Squad and take appropriate decisions, including spelling out suitable punishments to those found guilty.
- 8.6.4.2 The Anti-Ragging Squad:- The Anti-Ragging Squad shall be nominated by the Head of the institution with such representation as considered necessary and shall consist of members belonging to the various sections of the campus community. The Squad shall have vigil, oversight and patrolling functions. It shall be kept mobile, alert and active at all times and shall be empowered to inspect places of potential ragging and make surprise raids on hostels and other hot spots. The Squad shall investigate incidents of ragging and make recommendations to the Anti-Ragging Committee and shall work under the overall guidance of the said Committee.
- 8.6.4.3 Monitoring Cell on Ragging:- If the institution is an affiliating university, it shall have a Monitoring Cell on Ragging to coordinate with the institutions affiliated to it by calling for reports from the Heads of such institutions regarding the activities of the Anti-Ragging Committees, Squads, and Mentoring Cells, regarding compliance with the instructions on conducting orientation programmes, counseling sessions, etc., and regarding the incidents of ragging, the problems faced by wardens and other officials, etc. This Cell shall also

review the efforts made by such institutions to publicize anti-ragging measures, cross-verify the receipt of undertakings from candidates/students and their parents/guardians every year, and shall be the prime mover for initiating action by the university authorities to suitably amend the Statutes or Ordinances or By-laws to facilitate the implementation of anti ragging measures at the level of the institution.

In accordance with the regulations set by UGC, an Anti-Ragging Committee and Anti-Ragging Squad has been constituted by the institute.

Anti-Ragging Committee (ICT Mumbai)

Dean (HRD)	Professor R. V. Adivarekar
Head Warden	Prof. D. D. Sarode
Three Professors/Associate Professors	Prof. Sadhana Sathaye
	Dr. J. T. Waghmare
	Prof. G. S. Shankarling
Support Staff	Dr. Satish Mane
Counsellor	Ms. Malini Shah
A. R. (Admin)	Dr. Arun Jogi
VP, Technological Association (Ex-officio)	Prof. Ashok Athalye
GS, Technological Association (Ex-officio)	
Concerned HOD (Invitee)	
Registrar	Prof. R.R. Deshmukh

Anti-Ragging Squad Members (ICT Mumbai)

Dean (HRD)	Professor R.V.Adiverekar
All Hostel Wardens	Dr. C. S. Mathpati, Mrs. Madhavi Wadkar, Dr. Jyotsna T. Waghmare, Prof. D. D. Sarode

Anti-Ragging Committee (ICT MARJ Campus):

Associate Dean Industry	Mr. Sharad G. Lahoti
Head Warden	Dr. Parag R. Nemade
Ladies Hostel Warden	Dr. Joyita Sarkar
Assistant Professor	Dr. Manojkumar Jadhao
Counsellor	Ms. Savita Satpute
Non-Teaching	Mr. Nagesh N. Alsatwar
Student	Mr. Unmesh Thorve
Student	Mr. Rehan Shaikh
Student	Ms. Shreya Bhardwaj
Student	Ms. Ketaki Patil

Anti-Ragging Squad Members (ICT MARJ Campus):

Associate Dean	Shri. Sharad Lahoti
Professor	Dr. Girish M. Joshi
Assistant Professor	Dr. Manoj B. Gawande
Ladies Hostel Warden	Dr. Joyita Sarkar
Data Executive	Shri. Sandip Pawar

Anti-Ragging Committee members (ICTM-IOCB Campus):

Director	Prof. P. R. Vavia
Faculty	Dr. Rupesh Malani
Faculty	Dr. Saurabh Patankar
Assistant Registrar	Mr. Sunil Kumar Mohanty
General Secretary (Technological Association ICTM-IOCB)	

Anti-Ragging Squad Members (ICTM-IOCB Campus):

Deputy Director	Dr. Rambabu Dandela
All Faculties	Dr. Sankha Karmakar, Dr. Dipak Maity, Dr. Ramakanta Naik, Dr. Saikat Bhaumik, Dr. Lisa Roy

8.6.5 OTHER MEASURES:

- 8.6.5.1 The Annexures mentioned in sub-clauses 6.1.4, 6.1.5 and 6.1.7 of these Regulations shall be furnished at the beginning of each academic year by every student, that is, by freshers as well as seniors.
- 8.6.5.2 The institution shall arrange for regular and periodic psychological counseling and orientation for students (for freshers separately, as well as jointly with seniors) by professional counselors during the first three months of the new academic year. This shall be done at the institution and department/ programme levels. Parents and teachers shall also be involved in such sessions.
- 8.6.5.3 Apart from placing posters mentioned in sub-clause 6.1.9 above at strategic places, the institution shall undertake measures for extensive publicity against ragging by means of audio-visual aids, by holding counseling sessions, workshops, painting and design competitions among students and other methods as it deems fit.
- 8.6.5.4 If the institution has B.Ed, and other Teacher training programmes, these courses shall be mandated to provide for anti-ragging and the relevant human rights appreciation inputs, as well as topics on sensitization against corporal punishments and checking of bullying amongst students, so that every teacher is equipped to handle at least the rudiments of the counseling approach.
- 8.6.5.5 Wardens shall be appointed as per the eligibility criteria laid down for the post reflecting both the command and control aspects of maintaining discipline, as well as the softer skills of counseling and communicating with the youth outside the class-room situations. Wardens shall be accessible at all hours and shall be provided with mobile phones. The institution shall review and suitably enhance the powers and perquisites of Wardens and authorities involved in curbing the menace of ragging.
- 8.6.5.6 The security personnel posted in hostels shall be under the direct control of the Wardens and assessed by them.
- 8.6.5.7 Private commercially managed lodges and hostels shall be registered with the local police authorities, and this shall be done necessarily on the recommendation of the Head of the institution. Local police, local administration and the institutional authorities shall ensure vigil on incidents that may come within the definition of ragging and shall be responsible for action in the event of ragging in such premises, just as they would be for incidents within the campus. Managements of such private hostels shall be responsible for not reporting cases of ragging in their premises.
- 8.6.5.8 The Head of the institution shall take immediate action on receipt of the recommendations of the Anti-Ragging Squad. He/ She shall also take action suo moto if the circumstances so warrant.
- 8.6.5.9 Freshers who do not report the incidents of ragging either as victims or as witnesses shall also be punished suitably.
- 8.6.5.10 Anonymous random surveys shall be conducted across the 1st year batch of freshers every

fortnight during the first three months of the academic year to verify and cross-check whether the campus is indeed free of ragging or not. The institution may design its own methodology of conducting such surveys.

- 8.6.5.11 The burden of proof shall lie on the perpetrator of ragging and not on the victim.
- 8.6.5.12 The institution shall file an FIR with the police / local authorities whenever a case of ragging is reported, but continue with its own enquiry and other measures without waiting for action on the part of the police/ local authorities. Remedial action shall be initiated and completed within the one week of the incident itself.
- 8.6.5.13 The Migration / Transfer Certificate issued to the student by the institution shall have an entry, apart from those relating to general conduct and behaviour, whether the student has been punished for the offence of committing or abetting ragging, or not, as also whether the student has displayed persistent violent or aggressive behaviour or any inclination to harm others.
- 8.6.5.14 Preventing or acting against ragging shall be the collective responsibility of all levels and sections of authorities or functionaries in the institution, including faculty, and not merely that of the specific body/ committee constituted for prevention of ragging.
- 8.6.5.15 The Heads of institutions other than universities shall submit weekly reports to the Vice-chancellor of the university the institution is affiliated to or recognized by, during the first three months of new academic year and thereafter each month on the status of compliance with anti-ragging measures. The Vice Chancellor of each university shall submit fortnightly reports of the university, including those of the Monitoring Cell on Ragging in case of an affiliating university, to the Chancellor.
- 8.6.5.16 Access to mobile phones and public phones shall be unrestricted in hostels and campuses, except in class-rooms, seminar halls, library etc. where jammers shall be installed to restrict the use of mobile phones.

8.6.6 MEASURES FOR ENCOURAGING HEALTHY INTERACTION BETWEEN FRESHERS AND SENIORS:-

- 8.6.6.1 The institution shall set up appropriate committees including the course-in-charge, student advisor, Warden and some senior students to actively monitor, promote and regulate healthy interaction between the freshers and senior students.
- 8.6.6.2 Freshers' welcome parties shall be organized in each department by the senior students and the faculty together soon after admissions, preferably within the first two weeks of the beginning of the academic session, for proper introduction to one another and where the talents of the freshers are brought out properly in the presence of the faculty, thus helping them to shed their inferiority complex, if any, and remove their inhibitions.
- 8.6.6.3 The institution shall enhance the student-faculty interaction by involving the students in all matters of the institution, except those relating to the actual processes of evaluation and of faculty appointments, so that the students shall feel that they are responsible partners in managing the affairs of the institution and consequently the credit due to the institution for good work/ performance is due to them as well.

8.7 MEASURES AT THE UGC/ STATUTORY/ REGULATORY BODY LEVEL

8.7.1 REGULATORY MEASURES:

- 8.7.1.1 The UGC and other Statutory /Regulatory bodies shall make it mandatory for the institutions to compulsorily incorporate in their 'Prospectus' the directions of the Supreme Court and/or the Central or State Governments with regard to prohibition and consequences of ragging, and that non-compliance with the directives against ragging in any manner whatsoever shall be considered as lowering of academic standards by the erring institution making it liable for appropriate action.
- 8.7.1.2 The UGC (including NAAC and UGC Expert Committees visiting institutions for various purposes) and similar Committees of other Statutory/Regulatory bodies shall cross-verify that the institutions strictly comply with the requirement of getting the undertakings from

the students and their parents/ guardians as envisaged under these Regulations.

- 8.7.1.3 The UGC and other funding bodies shall make it one of the conditions in the Utilization Certificate for sanctioning any financial assistance or aid to the institution under any of the general or special schemes that the institution has strictly complied with the anti-ragging measures and has a blemish-less record in terms of there being no incidents of ragging during the period pertaining to the Utilization Certificate.
- 8.7.1.4 The NAAC and other accrediting bodies shall factor in any incident of ragging in the institution while assessing the institution in different grades.

8.7.2 INCENTIVES FOR CURBING RAGGING:

- 8.7.2.1 The UGC shall consider providing special/ additional annual financial grants-in-aid to those eligible institutions which report a blemish-less record in terms of there being no incidents of ragging.
- 8.7.2.2 The UGC shall also consider instituting another category of financial awards or incentives for those eligible institutions which take stringent action against those responsible for incidents of ragging.
- 8.7.2.3 The UGC shall lay down the necessary incentive for the post of Warden in order to attract the right type of eligible candidates, and motivate the incumbents.

8.7.3 MONITORING MECHANISM TO ENSURE COMPLIANCE:

Apart from the monitoring mechanism built in under different sub-clauses of these Regulations, there shall also be the following monitoring mechanism:

- 8.7.3.1 The UGC shall constitute an Inter-Council Committee for prevention of Ragging consisting of representatives of the AICTE, the IITs, the NITs, the IIMs, the MCI, the DCI, the NCI, the ICAR and such other bodies which have to deal with higher education to coordinate and monitor the anti-ragging movement across the country and to make certain policy decisions. The said Committee shall meet at least twice a year in the normal course.
- 8.7.3.2 The UGC shall also have an Anti-Ragging Cell within the Commission as an institutional mechanism to provide secretarial support for collection of information and monitoring, and to coordinate with the State level and university level Committees for effective implementation of anti-ragging measures.

8.8 PUNISHMENTS

8.8.1 AT THE INSTITUTION LEVEL:

Depending upon the nature and gravity of the offence as established by the Anti-Ragging Committee of the institution, the possible punishments for those found guilty of ragging at the institution level shall be any one or any combination of the following:

- 8.8.1.1 Suspension from attending classes and academic privileges
- 8.8.1.2 Withholding/ withdrawing scholarship/ fellowship and other benefits.
- 8.8.1.3 Debarring from appearing in any test/ examination or other evaluation process.
- 8.8.1.4 Withholding results
- 8.8.1.5 Debarring from representing the institution in any regional, national or international meet, tournament, youth festival, etc..
- 8.8.1.6 Suspension/ expulsion from the hostel.
- 8.8.1.7 Cancellation of admission
- 8.8.1.8 Rustication from the institution for period ranging from 1 to 4 semesters
- 8.8.1.9 Expulsion from the institution and consequent debarring from admission to any other institution for a specified period,
- 8.8.1.10 Fine ranging between Rupees 25,000/- and Rupees 1 lakh.
- 8.8.1.11 Collective punishment: When the persons committing or abetting the crime of ragging are not identified, the institution shall resort to collective punishment.

8.8.2 AT THE UNIVERSITY LEVEL IN RESPECT OF INSTITUTIONS UNDER IT:

If an institution under a university (being constituent of, affiliated to or recognized by it)

fails to comply with any of the provisions of these Regulations and fails to curb ragging effectively, the university may impose any one or any combination of the following penalties on it:

- 8.8.2.1 Withdrawal of affiliation/ recognition or other privileges conferred on it
- 8.8.2.2 Prohibiting such institution from presenting any students then undergoing any programme of study therein for the award of any degree/diploma of the university
- 8.8.2.3 Withholding grants allocated to it by the university, if any
- 8.8.2.4 Withholding any grants chanelled through the university to the institution
- 8.8.2.5 Any other appropriate penalty within the powers of the university.

8.3 AT THE APPOINTING AUTHORITY LEVEL:

The authorities of the institution, particularly the Head of the institution, shall be responsible to ensure that no incident of ragging takes place in the institution. In case any incident of ragging takes place, the Head shall take prompt and appropriate action against the person(s) whose dereliction of duty lead to the incident. The authority designated to appoint the Head shall, in its turn, take prompt and appropriate action against the Head.

8.4 AT THE UGC/STATUTORY/REGULATORY BODY LEVEL:

If an institution fails to curb ragging, the UGC/Statutory/Regulatory body concerned may impose any one or any combination of the following penalties on it:

- 8.8.4.1 Delisting the institution from section 12B of the UGC Act or any similar provision in the Act of the Statutory/Regulatory body concerned
- 8.8.4.2 Withholding any grants allocated to it
- 8.8.4.3 Declaring the institution ineligible for consideration for any assistance under any of the general or special assistance programmes of the UGC/Statutory/ Regulatory body concerned
- 8.8.4.4 Declaring that the institution does not have the minimum academic standards and warning the potential candidates for admission accordingly through public notice and posting on the UGC Website/ Website of the Statutory/Regulatory body concerned.
- 8.8.4.5 Taking such other action within its powers as it may deem fit and impose such other penalties as provided till such time as the institution achieves the objective of curbing ragging.
- 8.8.4.6 Collaborating with one another to work out other possible deterrents.

NOTE : To fill an online Anti Ragging undertaking please log on to <https://anitragging.in>

UNDERTAKING TO BE GIVEN BY ALL STUDENTS

I have read all the Rules of Admission and after understanding these rules thoroughly, I have filled in the application form for admission for the current year. The information given by me in my application is true to the best of my knowledge and belief. I understand that if any of the statements made by me in the application form or any information supplied by me in connection with my admission is later on at any time, found to be false or incorrect, my admission will be cancelled, fees forfeited and I may be expelled from the ICT by the Vice Chancellor.

- a) I have not been debarred from appearing at any examination held by any Government constituted or statutory examination authority in India.
- b) I fully understand that the allotment of a course will be made to me depending on my inter se merit, order of preferences given by me and the number of seats available at that point of counseling.
- c) I understand that no document after the last date of submission will be entertained for the purpose of claims or concessions, etc. in connection with my admission unless otherwise mentioned in the rules.
- d) I am fully aware that the Vice Chancellor, ICT or his representative will not make any correspondence with me regarding admission. I am also aware that it is entirely my responsibility to see the notifications in the newspaper(s) and notices on the notice board and website of the ICT.
- e) I am aware that any rule imposed by the Institute such as 'imposing limits on the number of attempts permissible to pass any examination shall be binding on me.
- f) I hereby agree to conform to any Rules, Acts and Laws enforced by Government and I hereby undertake that, I will do nothing either inside or outside the Institute which may result in disciplinary action against me under these rules, acts and laws referred to.
- g) I fully understand that the Vice Chancellor, ICT has a right to expel me from the institute for any infringement of the rules of conduct and discipline prescribed by the Institute or Government and the undertaking given above.
- h) I am fully aware that, I will not be allowed to appear for the examination if I do not attend minimum 75 per cent classes of theory, practical, drawing etc. separately. I am also aware that I will not be allowed to appear for the examination, if I fail to submit satisfactorily all the assignments, jobs, journals, drawings, reports as required within the stipulated period.

Course

Date:

Name and Signature of the Student

DECLARATION /UNDERTAKING BY HOSTEL RESIDENTS

I, Mr. /Ms.....

Programme:....., Dept.

student of **Institute of Chemical Technology (ICT)**, permanent resident of

.....

.....

..... Phone No:.....

(Give permanent home address with telephone no.),

do hereby undertake on this the..... (Day), of..... (Month)..... (Year),

that as a hosteller at ICT Mumbai, I hereby solemnly promise that:-

1. That I shall obey in word and spirit the rules and regulations of the Hostel and any amendments thereof.
2. I shall at all times maintain the discipline and decorum of the Hostel.
3. I shall preserve, tend and safeguard the property of the hostel, and shall not knowingly or otherwise destroy, damage, or deface Hostel property.
4. I shall keep my room and the common grounds of the hostel clean and unsoiled at all times and will make it available for inspection as and when required.
5. I understand that ragging is strictly prohibited and is an offence. Any involvement will lead to disciplinary action from the hostel & institute authorities. I, hereby declare that, both I will not indulge in, nor tolerate ragging, in any form, even in words or intentions.
6. I understand that use of any addictive substance like tobacco, alcohol, narcotic or habit forming drugs, etc., is strictly prohibited in the hostel / Institute. I will be liable for any disciplinary action for indulgence in such activity, viz., smoking, consumption of alcoholic drinks or any other intoxicating substance in the hostel and Institute premises and found under its influence at any point of time / place during my studies in the Institute.
7. I will maintain my valuables in my own custody. The management is not responsible for any loss or damage.
8. I agree that no entry or exit will be made by me from 11:30 PM to 6:00 AM in the Institute, unless specific permission is taken.
9. I understand that prior permission has to be obtained from the competent authority to visit outside campus for bonafide purpose; I will be solely responsible for my safety and protection during my departure and return to the Institute. In case I leave the Institute /hostel without prior permission, Institute can initiate the disciplinary action against me and Institute authorities are not responsible for my safety.
10. In the event, when I take a leave (with permission) to visit hometown or other places, I will be solely responsible for my safety and protection during my departure and return to the Institute.
11. In the event of my parents / guardians or relatives are visiting me, I will inform the Warden in advance and access / contact with them, meeting in the hostel or going out for local visit will be with the consent of the Warden (Written permission).

12. I understand that no friends or outsiders are allowed in the hostel premises. Also, men cannot go to the women's hostel or vice versa if not otherwise stipulated and any such visit will be seen as a serious misconduct, inviting penalty.
13. I will play a proactive role as a student and suggestions / feedback for improvement or any concerns about aspects of hostel life will be brought to the notice of hostel incharge immediately.
14. I will strive to play a proactive role in keeping gender amity and maintain cordial & harmonious relations with all, group, individual and authorities on the campus. I understand that the Institute observes a non-negotiable stand with regard to issues of caste, creed and communal harmony.
15. I understand that my involvement in any unacceptable behavior under the code of conduct and above and any violation of hostel rules will lead to my immediate expulsion from the hostel / Institute.
16. I will not change my allotted room without permission from the authority.
17. I shall ensure that all dues, including any fines or penalties that may have been imposed against me, are paid in time to the Institute.
18. I shall strictly observe and abide by the code of conduct the Hostel.
19. I, hereby declare that, I will neither join in any coercive agitation/strike for the purpose of forcing the authorities of the Institute to solve any problem, nor I will participate in any activity which has a tendency to disturb the peace and tranquility of life of the ICT Hostel premises.
20. I, hereby declare that, I shall be solely responsible for my involvement in any kind of undesirable/indisciplinary activities outside the campus, and shall be liable for punishment as per the law of the land. I, further understand that, the Institute shall in no way provide any support to me and will not be held responsible for my any such action.
21. I, also declare that, I am not suffering from any serious/contagious ailment and/or any psychiatric/psychological disorder.
22. I will take all precautionary measures related to COVID-19 and will follow all the instructions laid down related to COVID-19 by the institute authority and by Government authorities from time to time.
23. I, further declare that, my admission may be cancelled, at any stage, if I am found ineligible and/or the information provided by me are found to be incorrect.
24. I, hereby undertake to inform the Institute, about any changes in information submitted by me, in the Application Form and any other documents, including change in addresses and phone nos., from time to time.

Date:

Signature of Student

DECLARATION BY PARENT/ GUARDIAN

I
, (Mother / Father / Guardian) hereby fully endorse the above undertaking/declaration given by my child/ward. And I will endeavour to induce my child/ward to do his/her best to observe the above stated undertaking in words and spirit.

Place:

Signature of Mother / Father / Local Guardian

Date:

INSTITUTE OF CHEMICAL TECHNOLOGY

(UNIVERSITY UNDER SECTION 3 OF UGC ACT 1956)

MATUNGA, MUMBAI - 400 019

UNDERTAKING TO BE GIVEN BY UNDERGRADUATE, POST-GRADUATE AND DOCTORAL STUDENTS

1. I, the undersigned, understand that confirmation of my admission is subject to passing the qualifying examination i.e. _____ with at least ___% (___ CGPA) of the aggregate marks and hence my admission will be effective only when I submit the proof to that effect. If I fail to produce the result of the qualifying examination before the end of first semester for any reasons, I shall be declared ineligible for the said admission and all the fees which I have paid shall be forfeited.
2. After declaration of the result of the qualifying examination, I shall obtain the Eligibility Certificate of the ICT as per the Rules. For M.Chem.Engg. M.Pharm. M.Tech. Courses and M.E. Plastic the last date for applying for Eligibility is 31st August (every year). (For other than ICT students only)
3. **Attendance:**
 - (a) I am required to attend the research related activities from the first day of joining the institute and if I fail to do so my admission will stand cancelled.
 - (b) I shall sign regularly the muster kept in the office of respective Department / Research Supervisor.
 - (c) I shall take prior permission of my Research Supervisor for any leave in writing.
4. **Fellowship:**
 - (i) I am aware that fellowship is available only for the GATE/GPAT/NET/CSIR/DBT qualified students for master's programmes and for all Doctoral programmes.
 - (ii) I am aware that my fellowship commences from the date of confirmation of my admission or date of joining the course, whichever is later.
 - (iii) I am also aware that institute shall not be held responsible for non-receipt of the respective fellowship amount from the funding agency in time. I undertake that I shall pay all the Institute's fees, charges and deposits by the due date declared and in no case I shall give any excuse of non-receipt of the fellowship for non-payment of the same.
 - (iv) I am given to understand that the institute does not have any budgetary provision for the payment of either part of full fellowships. The Institute will disburse the fellowship when the Institute receives the same.
5. As a doctorate student, I am aware that I am required to contribute to the academic / administrative activities of the Institute as per the prescribed norms without expecting any remuneration and the continuation of my fellowship will depend on my satisfactory participation and performance in such activities. Also, I shall abide by the Safety Rules of the Institute and shall undergo required training for the purpose.

Course and Branch: _____

Mobile No.: _____

email: _____

Date:

Name and Signature of the Student

INSTITUTE OF CHEMICAL TECHNOLOGY

(UNIVERSITY UNDER SECTION 3 OF UGC ACT 1956)
MATUNGA, MUMBAI - 400 019

UNDERTAKING TO BE GIVEN BY UNDERGRADUATE, POSTGRADUATE AND DOCTORAL STUDENTS

USAGE POLICY:

- Electronic resources such as e-journals, e-databases, e-books etc. made available by the Prof. M. M. Sharma Library, ICT Mumbai are for academic use.
- These resources can be searched, browsed and material may be downloaded and printed as single copies of articles as is done in the case of printed library material. Downloading or printing of a complete book or an entire issue or a volume of one or more journals (called systematic downloading) is strictly prohibited.
- Use of robots, spiders or intelligent agents to access, search and/or systematically download from these resources is also prohibited.
- Any violation of this policy will result in penal action as per the rules and regulations of the Institute.
- Please be aware that systematic downloading will cause the publisher to block to the entire community of users @ ICT Mumbai from accessing these resources.

USER-UNDERTAKING:

I understand the policy outlined above and undertake to abide by it. I understand that any violation of the policy will result in loss of my library privileges and/or other action as deemed appropriate by the Institute

Course and Branch: _____

Mobile No.: _____

Email: _____

Date:

Name and Signature of the Student

PROFORMA - B

(For P1/ P2/ P3 Candidates)

(For Physically Handicapped Candidates)

CERTIFICATE

Photograph
of the candi-
date showing
the Physical
disability

This is to certify that I have examined Mr./Ms _____
_____ on date _____. He/She has

(Name of the Physical Disability)

which comes under the sub category

Blindness (P1)/ Speech and Hearing impaired (P2)/ Orthopaedic disorder (P3)

Certified that :

1. The percentage of handicap is not less than 40% and is equal to%.
2. The disability is permanent in nature.
3. The candidate is capable of carrying out all activities related to theory and practical works as applicable to degree course in Engineering/ Technology without any special concessions and exemptions.
4. This certificate is issued as per the provisions given in the Person with Disability Act, 1995 and its amendments.

This certificate is issued for the purpose of his/ her admission to first year of four years degree course in Technical education for the academic year 2023-24.

Outward No. and Date :

Place :

(Name and Signature)

Director,

All India Institute of

Physically Handicapped, Mumbai

(Or) Dean/ Civil Surgeon of Government Hospital

Seal of the office

(Name of the issuing Authority)

PROFORMA - B-1

(To be issued on the printed letterhead of the concerned office)

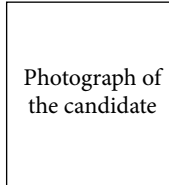
(For Physically Handicapped Candidates)

P3 (Learning Disability) Candidates

LEARNING DISABILITY CLINIC

L.T.M.G, HOSPITAL, SION, MUMBAI 400 022

CERTIFICATE



Name	:		Date:
Age	:		
Date of Birth	:		
Date of Registration:		L.D. No.	
Father's Name	:		
Std.	:	School/ College Name:	
Physical and Neurologic Assessment (Date)	:		
Psychological Assessment (Date)	:		
WISC (R)		Verbal IQ	:
		Performance IQ	:
		Global IQ	:
Interpretation	:		
Educational Assessment (Date)	:	WRAT: R	
		S	
		A	

Certified that :

1. The percentage of handicap is not less than 40% and is equal to%.
2. The disability is permanent in nature.
3. The candidate is capable of carrying out all activities related to theory and practical works as applicable to degree course in Engineering/ Technology without any special concessions and exemptions.
4. This certificate is issued as per the provisions given in the Person with Disability Act, 1995 and its amendments.

This certificate is issued for the purpose of his/ her admission to first year of four years degree course in Technical education for the academic year 2023-24.

Recommendations

Outward No. and Date :

Place : (Name and Signature of Issuing authority)

PROFORMA- E

(Specimen Application form for Cancellation of Admission) (To be submitted in duplicate)

Date:.....

To,
The Vice Chancellor,
ICT, Mumbai

Respected Sir,

Candidate Full Name : _____

Course : _____ Branch : _____ Date of Admission : _____

ICT Merit Number : _____ Amount of fees paid: Rs. : _____

Fee Receipt Number and Date : _____ (Attach Photocopy)

I request you to kindly cancel my admission in the abovementioned course and return my original documents and refund the fees paid as per the rules.

I understand that the fees will be refunded to me by direct bank transfer to my account.

Signature of Candidate

For Office use only:
Full address of the candidate :

Tel./Mobile No. : _____
E mail : _____

Amount Paid, Rs.	
Amount Deducted, Rs.	
Amount Refunded, Rs.	
Cheque No. and date	
Bank particulars	

Signature of Accounts Officer

Received the following original documents from the Admission Authority

- 1
- 2
- 3

Signature of the Candidate

Typos to be corrected and Annexure 1 to be replaced

ANNEXURE 1

(On official letterhead)

TO WHOM-SO-EVER IT MAY CONCERN

This is to certify that, Ms./Mr. _____ is working as a permanent, Full-time _____ in our _____, since _____. with total industrial /Teaching experience of _____years_____ months.

Ms./Mr. _____ has qualified the entrance examination in Ph.D. (Sci./Tech.) in _____ and wishes to pursue Ph.D. (Sci./Tech) in _____ under the guidance of _____, at Institute of Chemical Technology, Mumbai. Our industry/College has no objection regarding his admission at your industry. We take responsibility for releasing his for coursework, experimental work or discussions with the research supervisor as per need. Our industry/College will provide him with the necessary facilities for conducting part of the experimental work at our premises.

We found his responsible, enthusiastic and hardworking during his working tenure. She can prove to be an asset to any organization. We are happy to send her as for pursuing Ph.D. (Sci./Tech.) in _____ at your industry .We wish his success in his future endeavors.

Authorized Signatory

Typos to be corrected and Annexure 2 to be replaced

ANNEXURE 2

(Notarized affidavit on Rs 100/- Stamp Paper)

AFFIDAVIT

I _____ intend to take admission for PhD (Tech)/PhD (Sci) in _____ Department at Institute of Chemical Technology Mumbai – 19

1. I am registering under UGC Networking Resource Centre – Teacher Category and I know that I will not be entitled for any kind of fellowship/scholarship under this category.
2. I know that a proper timetable must be prepared by me after consulting with the research supervisor along with logbook which need to be signed by research supervisor at Institute of Chemical Technology Mumbai and authenticated by the Head of the Department.
3. I know that I must publish some part of the work in peer reviewed International Journals within two years from the day of registration else my registration stands cancelled.
4. I will not register any Masters student under me in my Institute to avoid research conducted by proxy.

I hereby irrevocably undertake that I shall follow the rules and regulations as laid by the Institute.

Name of the Candidate:

Signature of the Candidate:

Present Address:

Typos to be corrected and Annexure 3 to be replaced

ANNEXURE 3

(Notarized affidavit on Rs 100/- Stamp Paper)

UNDERTAKING

I _____ an adult inhabitant at present residing at _____ do hereby state and declare on solemn affirmation as under:

I had passed B.Chem/ B.Tech/ M.Tech/ MChem/..etc from _____ in the year _____ and desire to avail admission for my further studies i.e. _____ programme at Institute of Chemical Technology Mumbai.

I am currently working at _____ (Write Employer Industry name) _____ since _____ .

I declare that I have necessary permission from my employer _____ and my employer has no objection for my registration for the _____ programme , relevant course work, experimental work and discussion with faculties at Institute of Chemical Technology Mumbai related to _____ programme from time to time .

I declare that at the time of enrollment for the _____ programme I have not enrolled for any other programme at any other Institute. I also declare that I shall not register any Masters student under myself at my organization.

I declare that all the certificates and documents submitted by me are my own and I will be solely responsible for any discrepancy found in the certificates provided by me.

Signature

Full name of the Candidate

Typos to be corrected and Annexure 4 to be replaced

ANNEXURE 4

(Notarized affidavit on Rs 100/- Stamp Paper)

UNDERTAKING

I _____ an adult inhabitant at present residing at _____ do hereby state and declare on solemn affirmation as under:

I had passed B.Chem/B.Tech/M.Tech/MChem/..etc from _____ in the year _____ and desire to avail admission for my further studies i.e. _____ programme at Institute of Chemical Technology Mumbai.

I am currently working at ____ Write government laboratory name _____ since _____ .

I declare that I have necessary permission from my employer _____ and my employer has no objection for my registration for the _____ programme , relevant course work, experimental work and discussion with faculties at Institute of Chemical Technology Mumbai related to _____ programme from time to time .

I declare that at the time of enrollment for the _____ programme I have not enrolled for any other programme at any other Institute. I also declare that I shall not register any Masters student under myself at my organization.

I declare that all the certificates and documents submitted by me are my own and I will be solely responsible for any discrepancy found in the certificates provided by me.

Signature

Full name of the Candidate

ISCMA Award function – 22 January, 2020 Chief Guest – Mr. Adille J. Sumariwalla, Vice-President of Indian Olympic Association ▼



Dr. R. Vinu, Department of Chemical Engineering, Indian Institute of Technology Madras delivered Alkyl Amines – ICT Foundation Day Young Scientist Award Lecture ►



Foundation Day – October 10, 2019 Chief Guest - Professor Bhushan Patwardhan, Vice-Chairman, University Grants Commission. ▼



Yoga Day 21 June, 2019
Ms. Shilpa Suresh Salim, a certified Yoga trainer delivered a talk on essence of Yoga followed by Yoga session



विद्यापीठ गीत श्री रसायन देविका

उद्घोष तुझा जयघोष तुझा
उत्कर्ष तुझा जल्लोष तुझा
संघर्ष नको संहार नको
संदेश तुझा उपदेश असे
रसायन देविके श्री रसायन देविके ॥ १ ॥

विज्ञानाची एकच भाषा
विज्ञानाच्या दाही दिशा
नकोत सीमा विज्ञानाच्या
जैव रसायन मीलना
दे ध्यास हा मतिवर्धिने
रसायन देविके श्री रसायन देविके ॥ २ ॥

नको प्रदूषित भूजलवायु
विपुल अन्न अन् उदंड आयु
रोग नको अन् नको त्रुटीही
अखंड ऊर्जा निर्मळ पाणी
अक्षर हरिते जगन्माते
रसायन देविके श्री रसायन देविके ॥ ३ ॥

मूर्तीवंत तू कीर्तिरक्षिके
जगन्मान्य तू महन्मंगले
अभियंती अन् रत्नपारिखे
शतप्रणाम हो तुज नायिके
नवक्षितीजे तव चेतना ही
रसायन देविके श्री रसायन देविके ॥ ४ ॥

गणगणश्री तणतणश्री
जैवशिवश्री सृष्टिधारिके
रसायन देविके श्री रसायन देविके
वंदू गणनायिके श्री रसायन देविके ॥ ५ ॥

कवी : प्राध्यापक डॉ. जी. डी. यादव

दि. २७ फेब्रुवारी २०१२

कुलगुरू, रसायन तंत्रज्ञान संस्था

(प्रथम दीक्षांत समारंभ दिनी प्रकाशित.)

दिनांक ६ मार्च, २०१२)

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INSTITUTE OF CHEMICAL TECHNOLOGY, MUMBAI

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State Funded Public Institute
QS Asia University Rankings | 2022: 183
NIRF (2022) Universities: 14; Overall: 28 Research: 25

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Fax: 022-3361-1020

IOC, BHUBANESWAR

ICTM-IOCB Odisha Centre,
Indian Institute of Technology,
Kharagpur Extension Centre,
Near Hotel Swosti Premium,
Mouza-Samantpuri, Bhubaneswar- 13

MARATHWADA, JALNA

M/s Beej sheetal Innovations Centre
Private Limited,
BT-6/7, Biotechnology Park,
Additional MIDC Area,
Aurangabad Road, Jalna- 431 203

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