

भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

PLACEMENT BROCHURE

2020 -2021

IITH RANKED 8th IN NIRF FOR ENGINEERING



PLACE OF ORIGIN
Indian Institute of Technology Hyderabad,
Telangana, India

YEAR OF ORIGIN
2020

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Indian Institute of Technology
Hyderabad & Chaitanya Solanki

OUR CORE VALUES

Integrity:

Honest, ethical and responsible behaviour will be fundamental to all our dealings and actions.

Diversity of Ideas:

We encourage plurality and diversity of ideas to create a robust and vibrant future.

Enquiry:

We foster the spirit of scientific inquiry.

Academic freedom:

We ensure complete academic freedom in teaching and research.

Service to the nation:

We are committed to providing technology, solutions and trained manpower for the betterment of the people of India.

Transparency:

We exhibit transparency in all that we do.

Environmental Stewardship:

We are committed to developing and participating green technologies.

Excellence:

We endeavour to excel in research, education and student activities.

OUR VISION

Indian Institute of Technology Hyderabad will be the cradle for inventions and innovations. It will advance knowledge and scholarship to students in science, technology and liberal arts, and equip them to handle the challenges of the nation and the world in the 21st century.

OUR MISSION

IIT Hyderabad aims to be recognized as ideators and leaders in higher education, research and industry, and to develop human power with creativity, technology and passion for the betterment of India and humankind.

TABLE OF

CONTENTS

About Us	05
Director's Address	06
Academics	08
Placements	10
Summer Internships	18
Japan Day and Placement Day	21
Departments	24
Research and Development	41
Collaborations	43
What's New?	44
Faculty and Students	46
Student's Life	47
How to Reach	50
Office of Career Services Contacts	51



ABOUT US

IIT HYDERABAD

IIT Hyderabad is one among the 2nd generation of IITs started by the Govt. of India. Today IITH offers 9 B.Tech programs, 1 B.Des programme, 16 M.Tech programs, 3 M.Sc programs, 1 M.A (DS) program, 1 M.Des program and Ph.D. programs in all branches of engineering, science, liberal arts and design. The very foundation of IIT Hyderabad is based on research and innovation. The vibrant research culture is evident from the number of patents and publications that IITH has. At IITH students are given with a plethora of choices, which they diligently choose with the help of a faculty advisor. Courses that last for a semester are almost a foregone story at IITH. From 14-15 academic year onwards all B.Tech programs started offering courses that are of smaller credits; called the fractal academics; very carefully designed to keep the

enthusiasm of the students and to keep them in pace with the state of the art from 1st semester till 8th semester. IITH in the past couple of years has been highly successful in building tie-ups with leading academic institutions around the globe. IITH enjoys a very special relationship with Japanese Universities and Industries that goes beyond academic and research collaborations. In fact, some of the iconic buildings in IITH campus will carry the signature of Japanese architecture. IITH is creating a unique holistic educational ecosystem that offers interactive learning, a highly, flexible academic structure, cutting-edge research, strong industry collaboration, and entrepreneurship. It is providing an environment wherein students and faculty are not afraid to translate their dreams into realities.

FROM THE

DIRECTOR'S DESK



Dear Friends,

Welcome to Indian Institute of Technology Hyderabad.

We are proud of preparing dynamic leaders, who make a difference to the world, with the skills that are nurtured here for a better tomorrow. As an institute that has completed only 11 years of its existence, it is gratifying to note that we are doing well and are almost on par with some of the first generation IITs. With the NIRF ranking of 8 among all the engineering institutes and 17th overall rank in the country and with being within the top 10 ranks from India in QS world rankings, we stand tall. This is essentially due to over 210 dynamic young faculty of the institute with an average age of about 39, who work hard and take up challenges without the fear of failure, making IITH at the forefront of R&D innovations. A healthy faculty to student ratio of 1:14 and a good mix of UG and PG program with UG to PG to PhD ratio of 40:30:30, makes IITH a unique place for teaching and research.

The strong research culture at IITH is reflected from around 500 sponsored research projects of Rs. 220 Crores that our faculty members have been handling, with the last year's funds inflow being more than Rs. 50 Crores. The number of Scopus indexed publications in the last 5 years are above 2500, which again reflects the thriving research activity. With a strong Japanese collaboration

and the support from MHRD, the second phase infrastructure development is in its full swing and is expected to be completed by 2022. This is expected to give a big push to the research activity of the institute. IITH has a strong start up culture with a dedicated space for incubation and research park. By the end of the second phase we will have about 1.5 lakh sft of space each for both the above activities, which will boost the entrepreneurship activity significantly at IITH.

The fractal academics with an interdisciplinary approach, with departments such as AI, Climate Change, Engineering sciences provide a unique academic atmosphere at IITH. The BTech program in AI, a minor in entrepreneurship, Executive MTech in Data Science together with the Design and Liberal Arts departments represent the unique and diversified academic fabric of IITH. A BTech program in Biomedical Engineering has been introduced for the first time among the IIT system.

The institute has taken up a number of industry oriented measures from this year. A semester-long internship in the 6th semester for BTech/BDes students, a mandatory 1-credit course on "Industry Lectures" are to name a few. At least 50% of MTech projects from now on will be on industry defined problems. A number of new industry oriented MTech programs such as Additive manufacturing (with DRDO support), E-waste resource engineering & management (jointly with C-MET, Hyderabad and with MeitY support), Medical device innovation (jointly with AIG, Hyderabad), Energy science & technology, Integrated sensor systems, Network & information security, Polymers & biosystems engineering and Smart mobility, will

enhance our outreach to industry.

We are looking forward to strong collaborations, both academic and industrial, to help us grow stronger. Industry-R&D-Academia tie up on cutting edge technologies is the key for the growth of the country. IITH will play its part proactively in the near future in this direction.

We are looking forward to a strong and long standing collaboration with industry,

B S Murty

Director, IITH

WHAT WE OFFER

ACADEMIC PROGRAMMES

UNDERGRADUATE

B.Tech	Duration 4 years	Qualifying Test IIT-JEE (Advanced)
B.Des	Duration 4 years	Qualifying Test U-CEDD

POSTGRADUATE

M.Tech	Duration 2/3 years	Qualifying Test GATE
M.Sc	Duration 2 years	Qualifying Test JAM
M.Des	Duration 2 years	Qualifying Test CEED
M.A (DS)	Duration 2 years	Qualifying Test Written Test & Interview

DOCTORATE

PhD	Students with good academic background are admitted into the program through a rigorous interview. Assistantship for regular PhD students is provided by MHRD.
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2021 GRADUATING

BATCH PROFILE

B.Tech Programme	Strength
Civil Engineering	37
Chemical Engineering	29
Computer Science & Engineering	50
Electrical Engineering	51
Engineering Sciences	27
Mathematics & Computing	10
Mechanical Engineering	47
Materials Science & Metallurgical Engg.	16
Engineering Physics	19

M.Tech Programme	Strength
Artificial Intelligence	09
Biomedical Engineering	07
Biotechnology	09
Climate Change	07
Civil Engineering	22
Chemical Engineering	14
Computer Science & Engineering	36
Electrical Engineering	38
Mechanical Engineering	38
Materials Science & Metallurgical Engg.	12

ACM Programme	Strength
Artificial Intelligence	08
Civil Engineering	02
Electrical Engineering	10
Materials Science & Metallurgical Engg.	01

M.Sc Programme	Strength
Chemistry	39
Mathematics	18
Physics	18

M.A Programme	Strength
Liberal Arts	10

M.Des Programme	Strength
Design	14

PLACEMENT SUMMARY

Placements at Indian Institute of Technology Hyderabad for the academic year 2019-2020 has received **291*** offers (* as on 30 July 2020) for **479** registered students. More than 252 companies have registered for the placement process, out of which around 115 plus companies have completed the placement process till date.

The top paying companies are TSMC, Microsoft, Richtek, Denso and D.E Shaw. The highest salary offered for this year is **Rs.60.41 LPA**

and the average salary is **Rs.22 LPA**. There were **38** international offers.

A good number of students from UG, PG and M.Sc. opted for higher education in India and abroad.

Mentioned below are the few Universities opted by students for higher education:

University of Tokyo

Purdue University, USA

University Della Svizzera Italiana

University of Minnesota

Hokkaido University, Japan

University of Dallas

University of Texas, USA

Yokohama National University

George Washington University

Carnegie Mellon University

University of California

University of Maryland

Nagoya University, Japan

University of Massachusetts

University of Cincinnati

KTH, Sweden

Columbia University

University of Illinois

Tohoku University, Japan

National University Of Singapore

Ohio State University

New York University

University of Florida

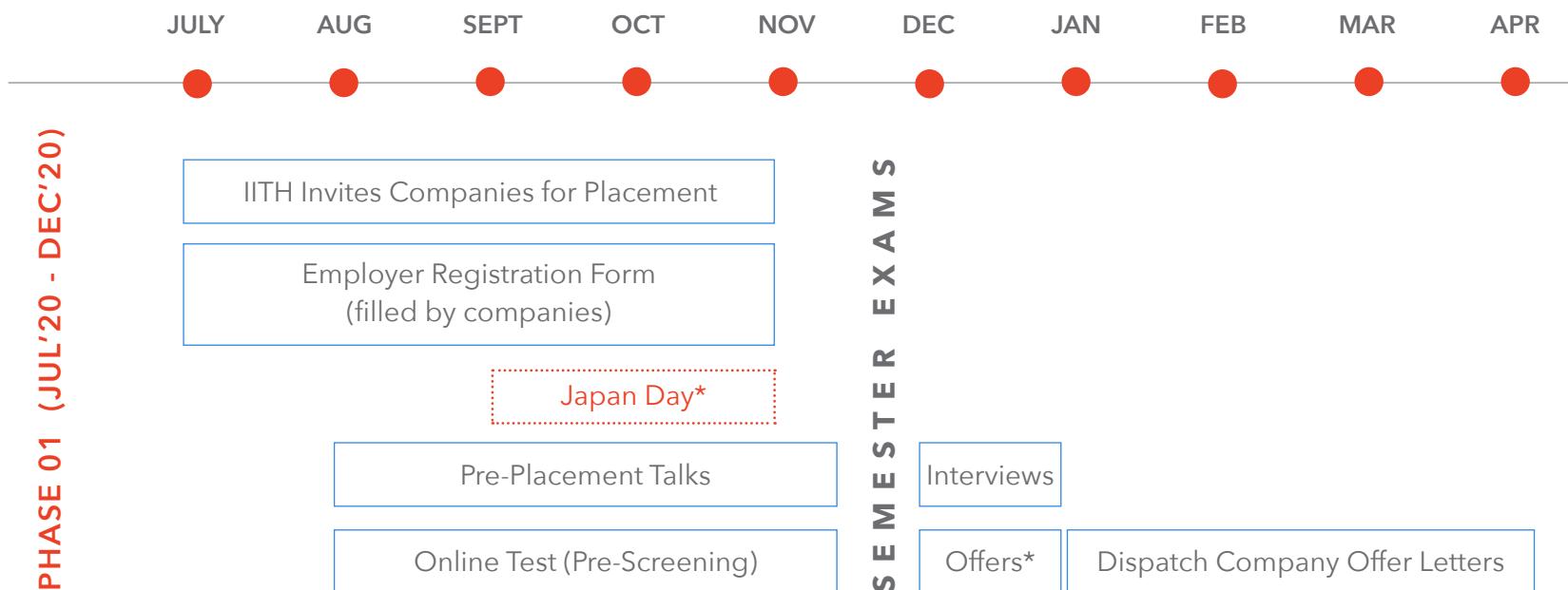
Keio University

PLACEMENT PROCEDURE

PHASE 01

- Interviews in the month of December (Every year)
- Highly Competitive

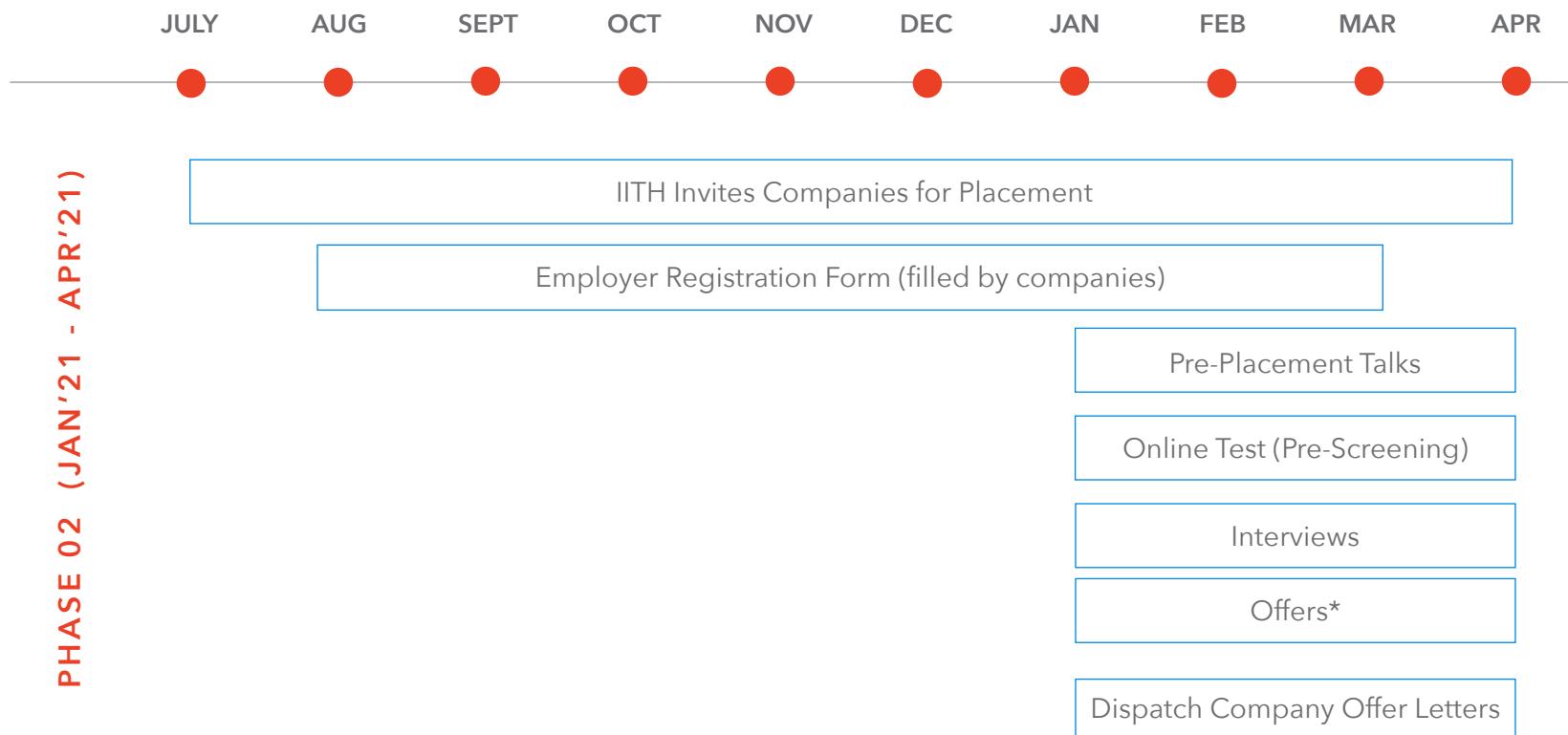
- Areas include IT, Circuit, PSU, Core, Auto, Banking and Finance, Healthcare, Pharma, R&D, Construction.



PLACEMENT PROCEDURE

PHASE 02

- Interviews in the months of January to April (Every year)
- For students with specific focus areas.
- Hiring in diverse areas (in addition to areas of Phase 1) Education, Manufacturing, Start-ups, Entrepreneurship)



OUR PROMINENT —

RECRUITERS

159 Solutions

Aakash Education

Aarvee Associates

Accenture

Accenture Japan

Accolite

Addverb

Aditya Birla

Adobe Systems

Aganitha Cognitive Solutions

Agility

Aisin

Altair

Amazon

Amrita University

Analog Devices

Applied materials

AQR Capital

Arcesium

Arista Networks

Arup

Ashoka Builders

Atkins

Axxela

Bajaj Auto

Bank of America

Barclays

BDL

BeeHyv

BELCAN

Benz

BPCL

Bharti Airtel

Bizongo

BNY Mellon

Bombardier

Boston Scientific

BSCPL Infrastructure Ltd

Byjus

Capgemini

C-DAC

C-Dot

Celigo India Private Limited

CeWiT

CodeNation

COGOPORT

Collins

Coromandel

CTS

Cyient Limited

D.E Shaw

Delhivery

Dell

Deloitte

Denso

Direct I

EA

Eaton

Eclerx

Exawizard

EY

F5 Networks

Fast Retail

FIITJEE

Finisar

Finmee

Flipkart

Flytxt

FuturesFirst

GE

Goldman Sachs

Gyandata

Handzap Software

Helium Consulting

Hexagon

Honeywell

HPCL

HSBC

Indeed

Infinite Solutions

Infosys

Innovare Labs

Intel

IOCL

ISRO

Jaguar Land Rover

Jaikranti Science

College,Latur

JECRC University

KLA Tencor

L & W Constuctions

L&T Constructions

L&T Infotech(LTI)

L&T Limited

L&T Technology Services

Leo force

Levadata

MAQ software

Maruti Suzuki

Marvell Semiconductor

Mathworks

MBB Labs

Medgenome

Mediatek

Mentor Graphics

Mercari

Merilytics

Microsoft IDC

Mobies

Murata Electronics Singapore

NEC

Netcracker

Next education

NFTDC

No Broker

NTT-AT

Nuevosol Energy

Oppo Mobiles

Optum UHG

Oracle

Orbees

OYO Rooms

Panasonic India

PayPal

PDPU

Perceptive Analytics

Periyar Maniammai University

Phenome People

Philips

Public sapient

Qualcomm

RAAM

Rakuten

Rao Edu solutions

Redpine Signals

Reliance Jio Infocomm Ltd

Richtek

Robert Bosch

Sai Life

Salesforce

Samsung Banglore

Samsung R&D Delhi

Schlumberger

Secureworks

Service Now

Setuserv

Shiv Nadar University

Shriram educorp Ltd

Siemens Gamesa

Sigmoid analytics

Smartron

SMS Data Tech

Softbank

Spandana Spoorthy

Spiral Inc

Sprinklr

Stelios

Strandlife Sciences

Stryker

SUZUKI Motor Corporation

Svaya Robotics

Swiggy

Synopsys

Tata Advanced Systems

Tata Motors

TCE

TCS R&D

Teach For India

Technoforte

Techolution

Telstra

Tesco

Thermofisher

Think I

Thornton Tomasetti

Toshiba India

Toyota Research Institute-

Advanced Development

TSMC

UHG

UTC F&S

Uurmi

Value Labs

Vashishta Educational
Institutions

Vassar Labs

VE Commercials

(Volvo+Eicher)

Vedanta

Vidyamandir Classes

Vignan's Foundation for Science -

Technology and Research

Virtusa

Walmart Labs

WCB Robotics

Works Applications

Worley

Xilinx

Xion Multiventures

XPO

Yahoo Japan

Yokogawa Electric Corporation

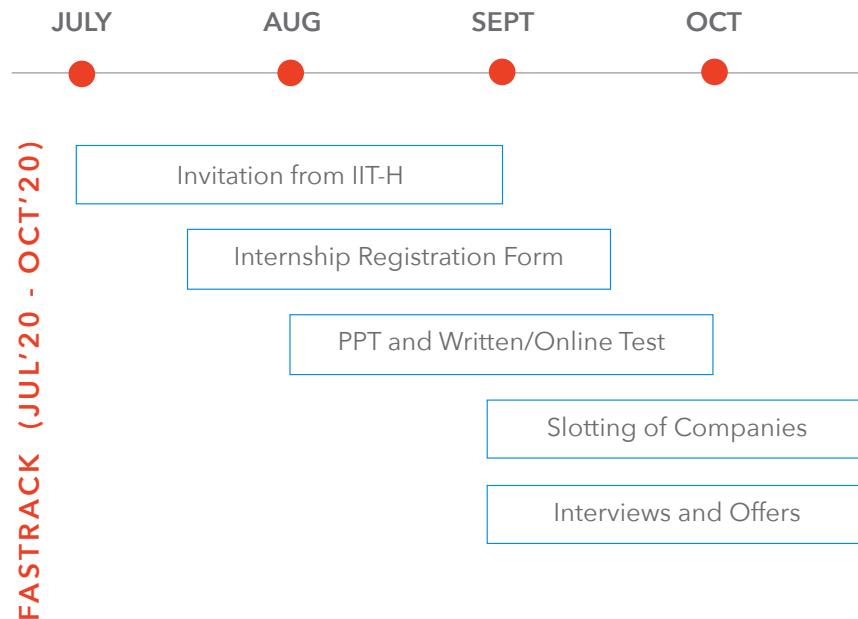
Zenoti

Zensar

ZS Associates

Zuti Engineering

INTERNSHIP PROCEDURE



SUMMER

INTERNSHIPS

IITH witnessed a significant increase in the number of Internship offers this year when compared to last year. For the academic year 2019-20, students secured a total of 157 offers from 50 companies. International offers also increased considerably with 14 offers from 7 Japanese companies.

Listed below are our prominent recruiters for 2019-20:

Adobe	DE Shaw	Honeywell UOP
AGC Asia Pacific	Deloitte	Indeed
AMS	DG TAKANO	KLA Tencor
Apexplus	Eaton	KPIT
Arcessium	GE Digital	KRG Consultants
Arista	Great four systems	L&T Infotech
ASACO	Goldman Sachs	Media.net
Blitzjobs	HCCI	Microsoft
BNY Mellon	Honeywell	NTT-AT

ORMAE

OYO Rooms

Peacock Solar

Philips

Pranava Technologies

Publicis Sapient

Rakshak Foundation

Salesforce

Samsung R&D Delhi

Sansan

Siemens

SMS Data Tech

Spiral Inc

Spiral Robotics

Suzuki Motor Corporation

Svaya Robotics

SYF

TRDDC

TCS

TESCO

Texas Instruments

UST Global

Xilinx

2019 - 2020

JAPAN DAY

HELD ON 14 SEPTEMBER 2019



Objectives of Japan Day Event:

- To serve as a bridge in bringing Japanese companies and IITH students together for mutual long term relationships.
- To enable companies to reach diverse pool of students at IITH and also understand the research projects at IITH
- To enable students to broaden knowledge on areas of Technology in demand, career prospects and work culture in Japan.
- To develop industry contacts and explore career opportunities

NO. OF JAPANESE COMPANIES VISITED: 17

TOTAL OFFERS FROM JAPANESE COMPANIES: 45

COMPANIES THAT PARTICIPATED IN JAPAN DAY 2019

Spiral

DG Takano

Axion Research

NTT-AT

Toshiba Memory Corporation

En World

Enrisson



OTHER JAPANESE COMPANIES THAT VISITED /PARTICIPATED IN IITH ON-CAMPUS PLACEMENTS /INTERNSHIP 2019-20

SMS Data Tech

NTT-AT

Suzuki Motor Corporation. Jpn

Spiral

Sansan

DG Takano

Accenture Japan

Aisin

Fast Retailing

Rakuten

Denso

Denso-Adit

Softbank

Indian Institute of Technology Hyderabad would be happy to extend invitation to more Japanese companies to join us in the event for a fruitful and long-lasting collaboration.

Companies interested to participate may contact:
Office of Career Services
office.placement@iith.ac.in

IITH ANNUAL

PLACEMENT DAY



Indian Institute of Technology Hyderabad celebrates '**Placement Day**' to felicitate the young, dynamic, enthusiastic and aspiring students with the "**Excellence Award**" for their significant contribution to the placement and internship activities and procedures, performed under the Office of Career Services of IITH.

They are honorably designated as '**Student Placement Coordinator**' and '**Student Internship Coordinator**', marking them as bearing greater responsibility and integrity and dedication.

We appreciate and thank the students for their efforts and valuable contribution in an exceptional way which fostered the success of the Institute in getting maximum companies.

DEPARTMENTS



- 01. Artificial Intelligence
- 02. Biomedical Engineering
- 03. Biotechnology
- 04. Chemical Engineering
- 05. Chemistry
- 06. Civil Engineering
- 07. Climate Change
- 08. Computer Science
- 09. Design
- 10. Electrical Engineering
- 11. Engineering Science
- 12. Liberal Arts
- 13. Materials Science & Metallurgical
- 14. Mathematics
- 15. Mechanical & Aerospace
- 16. Physics

01. ARTIFICIAL INTELLIGENCE

 <https://ai.iith.ac.in/>



The Department of AI at IIT Hyderabad's mission is to produce students with a sound understanding of the fundamentals of the theory and practice of Artificial Intelligence and Machine Learning. The mission is also to enable students to become leaders in the industry and academia nationally and internationally. Finally, the mission is to meet the pressing demands of the nation in the areas of Artificial Intelligence and Machine Learning.

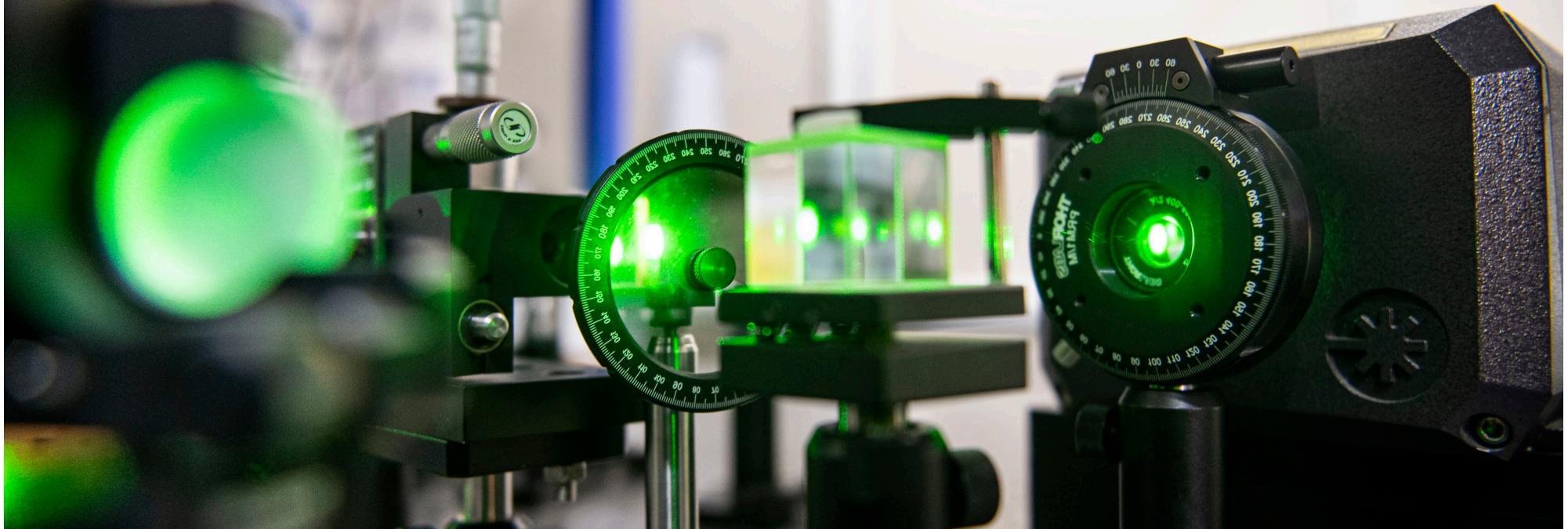
The basic aim is to create a complete ecosystem for Artificial Intelligence Academics and Research at IIT Hyderabad. This involves B.Tech., M.Tech. and different Minor Programs in AI. Moreover, the R & D will be strongly entwined with academics.

Research Areas:

Deep Learning, Explainable Machine Learning, Generative Models, Autonomous vehicles, Computer vision, Video quality assessment, Speech systems, AI for agriculture, Bayesian learning, Social media and text analysis, Robotics, Recommendation systems and data mining, ML in astronomy, Inference algorithms, Graphical models, Big data analysis, Computer Architectures for AI, AI and Internet of Things, AI and High Performance Computing and Natural Language Processing.

02. BIOMEDICAL ENGINEERING

🌐 <https://bme.iith.ac.in/>



The Biomedical Engineering at IIT Hyderabad is where the boundaries between disciplines fade for defining excellence in research and education. The primary mission of the department is to foster interdisciplinary work of highest quality by bringing together a broad spectrum of faculty expertise under a single umbrella to focus on research in Biomedical engineering.

Research Areas:

The students are exposed to advanced courses in biomedical engineering like biomedical devices, imaging, Lab on a Chip bio-sensors, biomaterials, Brain-Machine interfaces, stem cells, nano

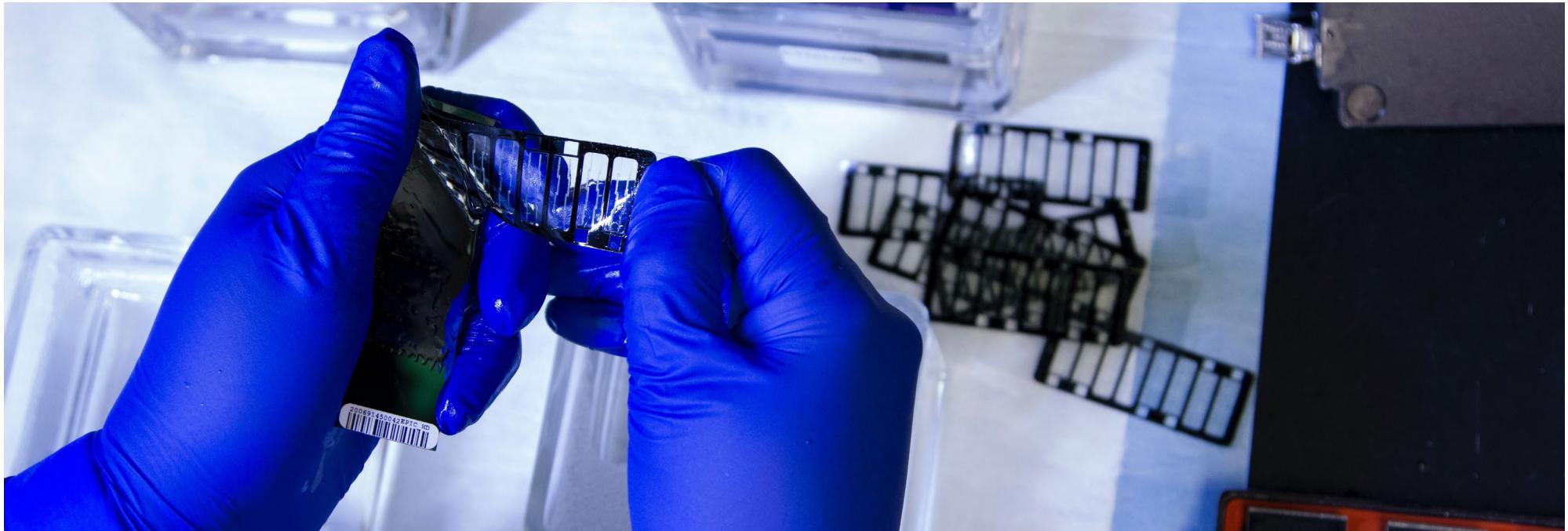
and regenerative medicine.

Research Facilities / Labs:

Biofabrication and Tissue Engineering, Biomedical Imaging, Biomicrofluidics and Biomechanics, Bio-nanotechnology and Nanomedicine, Computational Neurosciences, Computational Systems Biology and Biomechanics, Nano medicine and Regenerative medicine, Neurotechnology and neuroscience, Regenerative Medicine and Stem Cell Research

03. BIOTECHNOLOGY

🌐 <https://biotech.iith.ac.in/>



The department of biotechnology's contributions are multi-directional in addressing the various medical and environmental challenges faced by mankind. Two post graduate degree programs are offered in the department of Biotechnology: M.Tech & PhD.

Research Areas:

Carcinogenesis, Infectious Diseases, Prion & amyloid Diseases, molecular mechanisms of diseases/toxicity using zebrafish animal model, electrophysiology, Molecular and Cellular Neurobiology and Structural Biology.

Research Facilities / Labs:

Flow-cytometer, Fluorescence microscope, Multi-mode readers, High speed & Ultracentrifuges, FPLC, Clusters, Spectrophotometer, CD, Cell & microbial culture facilities, etc.

04. CHEMICAL ENGINEERING

🌐 <https://che.iith.ac.in/>



The Chemical Engineering Department acquired state-of-the-art infrastructure for performing research that cuts across boundaries of conventional chemical engineering.

Research Areas:

Advanced Materials, AL & ML in Chemical Engineering, Bio-engineering & Biotechnology, Computational & Systems Biology, Mineral Processing, Energy Conversion & Storage, Fluid Mechanics, Heterogeneous Catalysis, Process Systems Engineering, Polymer Science & Engineering, Techno-Economic Analysis, DFT & MD

Research Facilities / Labs:

We have state-of-the-art infrastructure and research facilities that cover both theoretical and experimental aspects of all core research areas.

05. CHEMISTRY

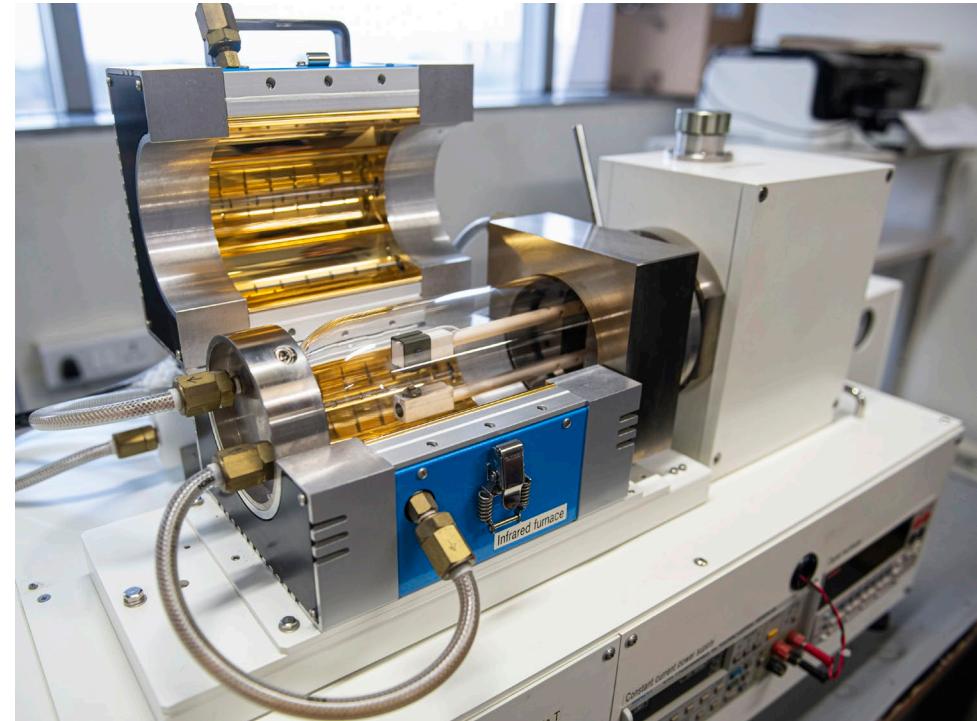
🌐 <https://chemistry.iith.ac.in/>

Since its inception in 2008, the Department of Chemistry at IIT Hyderabad has been committed to empower the undergraduate and postgraduate students with strong hold of the subject and to develop critical thinking-based approach and scientific temperament in the field of chemical science. We are a growing department with 16 dynamic and passionate faculties and around 80 young and enthusiastic doctoral students with diverse research interests.

At master's level, we have introduced a rigorous one-year research project-based learning program as a part of the MSc curriculum to ensure real hands-on research experience to train our students for future research challenges. We provide student friendly scientific environment with excellent student to faculty ratio of 4:1, which gives ample opportunity to students to interact and satisfy their intellectual curiosity on one to one basis.

Research Areas:

The department is actively pursuing a broader research in various areas namely Organic Synthesis and Drug Discovery; CO₂ Activation and Pollution Abatement; Organometallic Chemistry; Molecular Sensors; Energy Conversion, Saving and Storage; Small Molecule Activation; High Performance Composites; Green Chemistry; Molecular Modeling; Spectroscopy and Dynamics of Transient Species; Strongly Correlated Materials for Thermoelectrics and Superconductors; Functional Organic Materials and Supramolecular Chemistry; Bioorganic Chemistry; Biophysical Chemistry; Computational Inorganic Chemistry.



Research Facilities / Labs:

State of the art research facilities that include 600 & 400 MHz NMR, XPS, AFM, BET Analyzer, Raman Spectrometer, Glove Boxes, UV-Vis-NIR Spectrometer, CHNS-Analyzer, XRD, ICP, HRMS, CD, ESR, GC-MS, HPLC, TGA and many more sophisticated set-ups. The department is also equipped with necessary infrastructure for carrying out wet chemical syntheses and related experimentation.

06. CIVIL ENGINEERING

🌐 <https://civil.iith.ac.in/>



The curricula for these specializations ensure proficiency in breadth of topics as well as sufficient depth of coverage within each area. Students graduating from the programme are provided exposure to the latest analysis and design softwares such as ABAQUS, STAAD Pro, ANSYS, ZenCrack, FLAC 3D, PLAXIS 2D/3D and GeoStudio Professional, GMS, ERDAS, HGA, in a state-of-the-art computational facility.

Research Areas:

Structural Strengthening, Earthquake Engineering, FRP composites, Improved Road and Rail Performance, Ground Improvement, Soil-Structure Interaction, Recycled Material for Construction, Waste water treatment, Solid waste management, Remote Sensing with GIS, Contaminant transport, Ground water flow, Surface water Hydrology and Development of Advanced Computational Techniques.

Research Facilities / Labs:

Geotechnical Engineering, Structural Engineering, Water Resources Engineering, Traffic Engineering, Highway Materials, Air Quality Monitoring, Microbiology, Solid & Hazardous Waste Management, Water & Wastewater Engineering, Water Quality Analysis, Advanced Geotechnical Engineering, Geosynthetic Testing, Large Scale Testing, Advanced Soil Dynamics, Ground Charaterisation, Advanced Cement Based Materials, Adavanced Structural Material Testing, Scaled Structural Testing and Materials Characterisation.

07. CLIMATE CHANGE

🌐 <https://cc.iith.ac.in/>



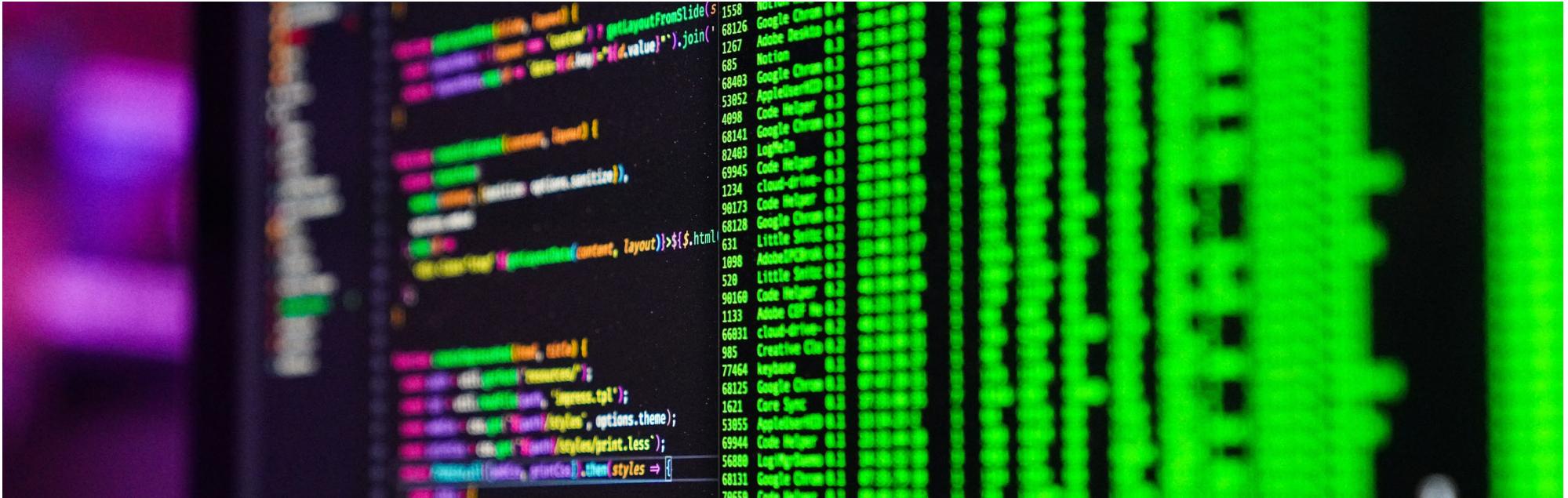
Research Areas:

Climate change is one of the few subjects that cuts through many research disciplines as well as many sectors of society. The scientific understanding of climate change is complex, its consequences and issues are of a wide variety, and importantly, they are time and region specific. While identifying key areas/disciplines is difficult, the following have a good fit given its strong association with society and economy, i.e., agriculture, carbon budget, computer sciences, data sciences, energy, environment, infrastructure, mobility, and water resources. Of course, there is much more, and all of it leads to enhanced knowledge, technological innovations, and business opportunities.

The Department of Climate Change at the IIT Hyderabad attempts to explore climate change integrating academic knowledge with practical knowledge bringing scientists, engineers, practitioners and students together. The key is an understanding of the strong association between the basic climate sciences, the technology & engineering solutions, and the policy. The curriculum involves core courses, elective courses, seminar series by the experts of various disciplines, focus group discussions, field visits, and research thesis.

08. COMPUTER SCIENCE

🌐 <https://cse.iith.ac.in/>



The Department of Computer Science and Engineering (CSE) at the Indian Institute of Technology, Hyderabad (IITH) offers B. Tech, M. Tech (including a specialization in Information Security & Data Sciences) and Ph.D. programs.

Research Areas:

Theoretical computer science, algorithms, graph theory, networking, distributed systems, compilers, machine learning, image/video processing and big data analytics. The faculty also have huge sponsored research projects in the application domains of cyberphysical systems, disaster management and big data analytics.

Research Facilities / Labs:

Machine Learning: Visual Learning and Intelligence Lab (VIGIL)

Computer Networks: Networked Wireless Systems Lab (NeWS), Cyber Physical Systems Lab, Practical Networking (PraNet) Lab

Theory: Theoretical Computer Science Lab

Systems: Computer Architecture and Machine Learning Lab (CANDLE), Data Informatics Group, DISANET Lab

09. DESIGN

🌐 <https://design.iith.ac.in/>

The Department of Design offers a vibrant environment for learning, practising and exploring several facets of Design. The department envisions to creatively engage in the space between technologies and people.

Department of Design currently offers Bachelors of Design (B.Des), Master of Design (M.Des), Doctor of Philosophy (Ph.D) in Design and Design Minor Program. The teaching methods focus on customised student requirements. Students experience a strong foundation through courses like Evolution of Design, Design Process, Design Thinking, Photography, Film Appreciation, Form Exploration, Material Exploration, Environmental Perception, Elements of Design and Principles of Design. This foundation enables them to branch out into electives like User Experience Design, Graphic Design, Advanced Photography, Filmmaking, Animation, Illustration, Spatial Design, Product Design, System Design, Furniture Design, Information Visualisation and Interaction Design. The Design students also explore Crafts and Performance Arts through the courses offered in Creative Arts. The balance of foundation and specialisations make the students flexible as per the needs of the industry.

Research Areas:

Department of Design focuses on research in Traditional as well as Emerging Technologies. Research areas include Culture and Heritage, Traditional and Contemporary Photography, Art, Architecture, Design Education, Film Theories and Interactive Filmmaking, Design and Sustainability, Sketching Technologies, Haptic Communication, 3D Printing, Passenger Drone Design,



Projection Mapping, Design and Performance Art, Interactive Installations, System Designs, Design for Rural Development, Game Designs and Mixed Reality Experiences.

Facilities/Labs:

Department of Design Labs host the latest technology and equipment like Computerized Numerical Control (CNC) Machine, Digital Single-Lens Reflex (DSLR) Cameras, Projection Mapping Devices, Projectors for Film and Experimental Performance Art, Film and Sound Editing Systems, Drawing Display Monitors, Haptic Devices, 3D Printers, Laser Scanners, Cave Automatic Virtual Environment (CAVE) System for Mixed Reality Experiences, 360-Degree Virtual Reality Cameras, 360-Sound Capture Devices, Printing and Binding facilities.

10. ELECTRICAL ENGINEERING

🌐 <https://ee.iith.ac.in/>



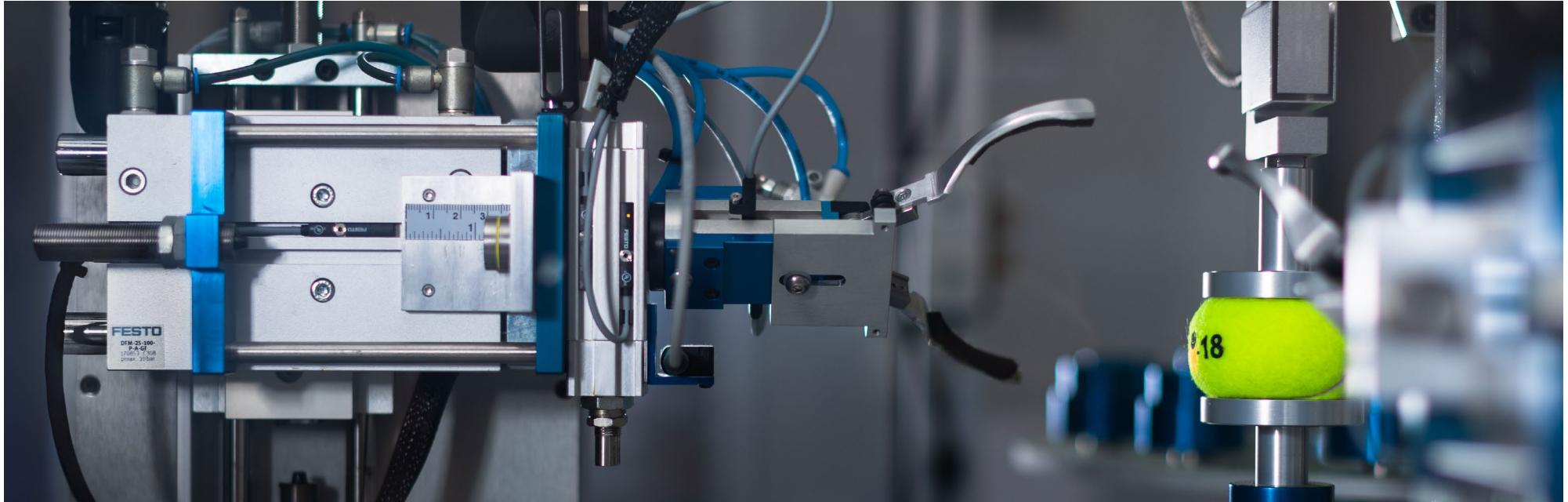
The Department of Electrical Engineering (EE) at IIT Hyderabad offers a vibrant environment for under graduate, post graduate education and research in many areas of Electrical Engineering. The department comprises a diverse group of faculty members with varied research interests and has produced more than 150 research publications in internationally reputed journals, and conferences. The department has sponsored research worth more than 35 Crores.

Research Areas: Research areas are a healthy mix of traditional Electrical Engineering and interdisciplinary research. Major areas of faculty expertise will include Micro-electronics and VLSI, Communications and Signal Processing, Power Electronics and Power Systems, Systems and Control. Some of the emerging research fields will include 3-D IC's, 3-D MEMS, Micro/Nano electronics and fluidics, Cooperative Communication, Speech and Multimedia Signal Processing, Source Coding, Space-Time Coding, Information Theory, Cognitive Radio/Radar, Cyber Physical Systems, Image and Video quality Assessment, Green ICT(micro grids, sensor networks), Power Systems and Electronics, Identification and Estimation, Fault Diagnosis, Micro Grid/Smart Grid, Advanced Control Applications, Statistical Process monitoring and Control, Artificial Intelligence based Computer Aided Design techniques for VLSI, Healthcare Electronics, Design for testability and fault tolerant circuit design, Nano-magnetic Quantum Computations.

Research Facilities / Labs: Coding & Communication Theory Lab, Renewable Energy and Power Systems Lab, Power Electronics and Power Systems (PEPS) Lab, Smart Power Applications and Renewables Control (SPARC) Lab, Immersive Multimedia and Telepresence, Laboratory for Video and Image Analysis (LFOVIA), Electron Devices Research Lab, Dynamics and Control Lab, Speech Information Processing (SIP) Lab, Littlings Lab, Nanophotonics Lab, Advanced Embedded Systems and Digital IC Design Lab, Flexible Electronics and Nanodevices Lab, VLSI Research lab and Wireless Communications and Networking (WiCoN) Lab.

11. ENGINEERING SCIENCE

🌐 <https://es.iith.ac.in/>



Engineering Science is a unique interdisciplinary B. Tech. program started at IIT Hyderabad for the first time in 2012. It focuses on the T-Education model where the horizontal line in T corresponds to breadth while the vertical line corresponds to the depth. We take 25 students every year for this program. For the first two years of this program students take courses from different departments such as Computer Science, Electrical, Maths and Computing, Mechanical, Chemical, Civil, Material Science, Physics and Chemistry. They select their core branch by the end of 2nd year and continue to specialize in their respective branches from 3rd year onwards. This 'T' based model gives a holistic perspective in engineering education.

Research Areas:

Emphasis on understanding and integrated application of engineering, Ability to apply acquired math, science and engineering skills to solve real-world engineering problems, Ability to identify, formulate and solve multi-disciplinary engineering problems, Ability to work well in interdisciplinary teams with focus on system integration.

Research Facilities / Labs:

The Engineering Science Department has a world-class faculty with education and training from the best Universities in India and abroad.

12. LIBERAL ARTS

🌐 <https://lba.iith.ac.in/>

Liberal Arts at IIT Hyderabad is a leading center for the study of a highly diverse range of subjects including Cultural Studies, Economics, English (Literature and Language), Psychology, Linguistics, Sociology and Social Anthropology.

MA (DEVELOPMENT STUDIES)

The concern with development encompasses all aspects of human life - physical, psychological, cultural, political, economic and ecological. How can we address each of these while simultaneously appraising their interdependence? The challenge is to train and conceive of professionals and roles that can critically inform ways in which these different areas of life affect one another. The MA - Development Studies program at the Department of Liberal Arts, IIT-H does just that. Through its interdisciplinary approach, it offers a plurality of ways in which the discourse of Development can be innovatively adapted to the ever-changing fabric of human life. Faculty coordinating the different courses in this program come from disciplines of Anthropology, Development Studies, Economics, Psychology and the Humanities. With courses offered in the fields of Development Theory and Policy, Health, Gender, Technology Studies, Economics, Environment and Sustainability and Disease Management, and a dedicated Internship component, this two-year program offers students a formidable platform to engage with contemporary research in India and globally.

Research Areas: The broad areas of ongoing research in the department are Economic growth, Macroeconomics, Monetary economics, International finance, Gender studies, Cultural studies,

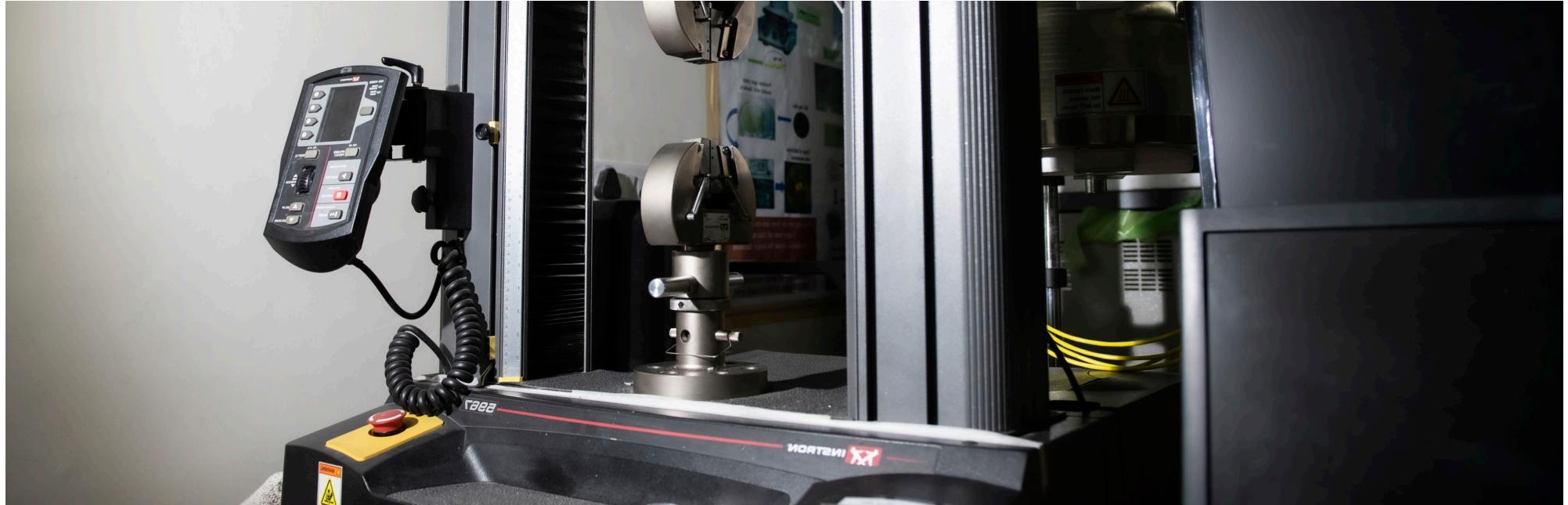


Clinical Psychology, Positive Psychology, Literary Theory, Rhetoric and Composition, Modernist Fiction, Literature and the Visual Arts, Health Psychology, psycho-oncology, Cultural Psychology, Indigenous Healing, Medical Anthropology, Anthropology of the Media, Sculpture, New Media Art.

Research Facilities / Labs: Department of Liberal Arts has research facilities that cover both theoretical and experimental aspects of all core research areas. Few of them are given below:
Language and Cognition Laboratory, Psychology Laboratory, Applied Econometrics Laboratory.

13. MATERIALS SCIENCE AND METALLURGICAL ENGINEERING

🌐 <https://msme.iith.ac.in/>



The department offers course work covering broad fields of materials science and metallurgical engineering from fundamentals to advanced and emerging areas such as nanomaterials, biomaterials, energy materials, electron microscopy, thermomechanical processing, thin films and devices, to name a few, which impart strong foundation on several major aspects of materials science and Metallurgical engineering and enhance the state of the knowledge of the students.

Research Areas:

Structural Materials, Functional Materials, Health-care and Biomaterials, Energy Materials, Nanoscience and Nano-Technology,

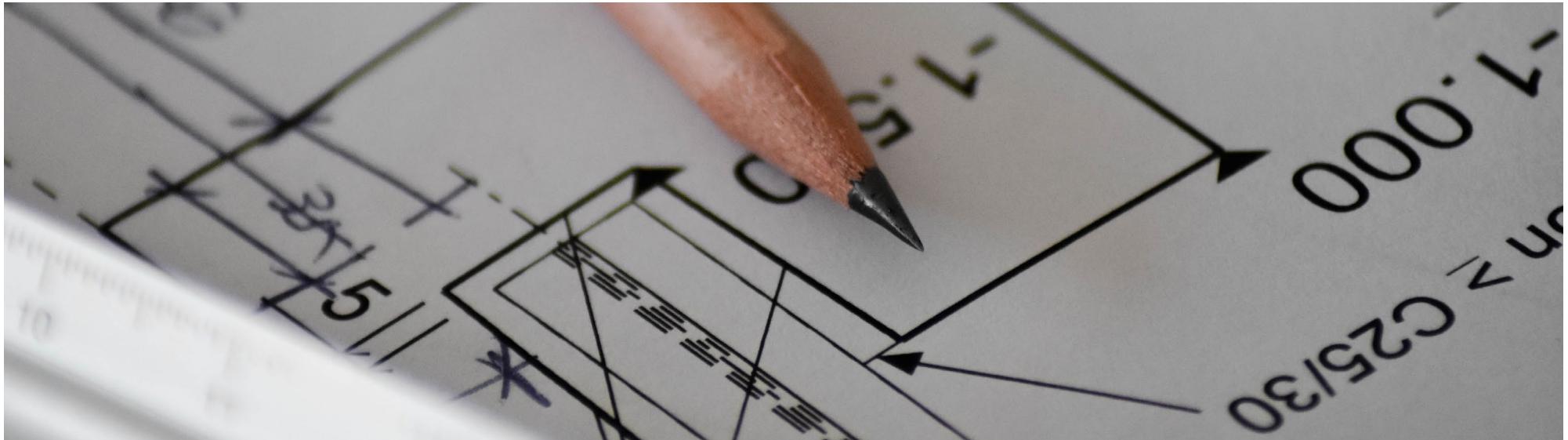
Computational materials science. The department regularly organises invited lectures, delivered by scientists and researchers of global repute from academia and industry, to expose the students to the cutting-edge R&D activities.

Research Facilities / Labs:

The department has several state-of-the-art laboratories such as X-materials Innovation Hub, Advanced Structural and Functional Materials research laboratories equipped with advanced and state-of-the-art equipment suitable for teaching, research and innovation.

14. MATHEMATICS

🌐 <https://math.iith.ac.in/>



The department offers a complete range of mathematics programmes: BTech in Mathematics and Computing, MSc with specialisations in Mathematics, as well as, Mathematics and Computing, and PhD in Mathematics and Statistics. Firmly focussed on training students right from the start of their academic career, the Department of Mathematics is recognised for its commitment to developing a strong foundation in mathematics, and offering statistical and computational skills to prepare them for positions in industry, government, and academia.

"SEPARATION OF MATHEMATICS AND COMPUTING NO LONGER MAKES SENSE"

Research Areas:

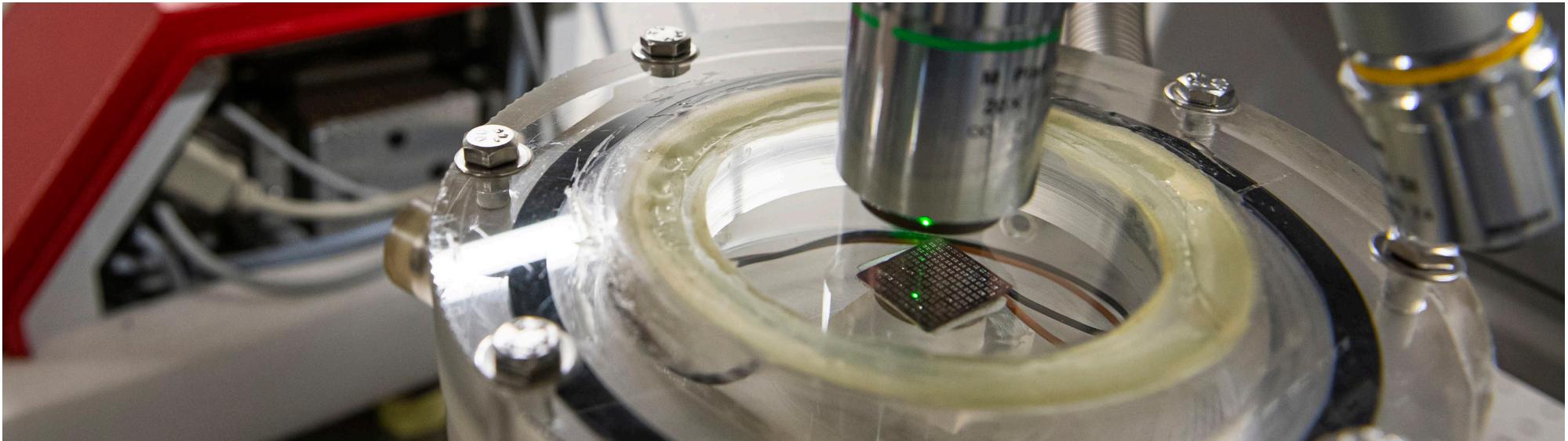
Faculty in the department are engaged in research areas such as Algebra, Analysis, Applied Mathematics, Data Analysis, Fluid Dynamics, Fuzzy Logic, Geometry, Machine Learning, Number Theory, PDE, Probability and Statistics (Optimal Design Theory and Reliability Theory). The students are specifically trained in theoretical, applied and statistical aspects of mathematics, as well as, in emerging areas, such as, Computational Intelligence, Coding and Cryptography, and Statistical Data Analysis, which is evident from the research projects they do as part of their curriculum.

Research Facilities/Labs:

The department has excellent and state-of-the-art computational facilities including high end GPU servers.

15. MECHANICAL AND AEROSPACE ENGINEERING

🌐 <https://mae.iith.ac.in/>



The department has a dynamic undergraduate curriculum which integrates the teaching of engineering science fundamentals along with modern industrial practices. The department has attracted a rich and diverse set of talented faculty. Major areas of faculty expertise include Acoustics, Dynamics and controls, Mechatronics, MEMS, NEMS, Linear & Nonlinear Vibrations, FEM, Fracture Mechanics, Contact Mechanics, Bio Mechanics, Composites, Impact Mechanics, Process Modeling and Optimization, Manufacturing, Rapid Prototyping, CNC Machining, Fluid Mechanics, Computational Fluid Dynamics (CFD), Thermodynamics, Combustion & Multiphase flows.

Research Areas:

The Department of Mechanical and Aerospace Engineering

broadly working on Fluid Energy Systems, Mechanics & Design and Integrated Design and Manufacturing. Focus research areas: Supersonic & Hypersonic Flows Combustion FM & HT, Energy Micro & Nanoscale Phenomena Sensors & Actuators, Industrial FEA New Materials & Processes, Applied Mechanics Robotics, Biomechanics, Acoustics, Dynamics Control, Digital manufacturing Micro manufacturing, Industrial CFD.

Research Facilities / Labs:

Lab of Acoustics, CAD/CAM, CAELAB, Dynamics, Fluid Mechanics, Heat Transfer, Mechatronics Design, Machining & Metrology, Manufacturing, MEMS, Optics, Solid Mechanics.

16. PHYSICS

🌐 <https://physics.iith.ac.in/>



The Department of Physics is one of the most vibrant centers of learning in the campus. The theme of the department is to focus research at smaller scales and become an outstanding center for Physics in the next decade. At present the department has 18 faculty members in the areas of High Energy Physics, Condensed Matter Physics, Micro-Electro-Mechanical Systems (MEMS), Ultra fast laser spectroscopy, Statistical and Biological Physics

Research Areas:

Astrophysics and Cosmology, Computational Condensed Matter Physics, Experimental Condensed Matter Physics, High Energy Physics, Optics, Spectroscopy and Laser-Plasma Physics.

Research Facilities / Labs:

Nanomagnetism and Microscopy, Advanced Detector Materials Design and Simulations apart from the B. Tech. and M.Sc and plans to establish a Computational NanoScience a Physics at Small-Scales and a Laser & Photonics.

RESEARCH AND

DEVELOPMENT

SPONSORED PROJECTS

	2019-2020	2018-2019	2017-2018
Total Amount	Rs. 64.49 crores	Rs. 58.34 crores	Rs. 102.57 crores
No. of Projects	111	137	104
No. of Funding Agencies	37	28	33

CONSULTANCY PROJECTS

	2019-2020	2018-2019	2017-2018
Total Amount	Rs. 4.24 crores	Rs. 3.18 crores	Rs. 4.22 crores
No. of Projects	129	31	68
No. of Funding Agencies	62	77	48



PATENTS AND PUBLICATIONS

The very foundation of IIT Hyderabad is based on research and innovation. The culture of research is inculcated in the undergraduate students in the first semester itself by introducing a one credit independent project, where the students execute a project of their choice in small groups irrespective of their branch. Heavy emphasis is given to the thesis component of the post-graduate programs. The vibrant research culture is evident from the number of patents and publications IITH has.

Till date there are about 103 patent applications filed by IIT Hyderabad. 14 of those patents applications are granted. These numbers speak volumes about the quality of academics and research at IITH.

RESEARCH ENDEVOURS

Every research endeavour is a voyage to discover truth and IITH is committed to promote this voyage in India. It aims at learning through practice and research. The Institute is on its way in creating the infrastructure, ambiance and culture necessary for the pursuit of creative ideas.

INNOVATIVE INITIATIVES

The conventional engineering skills are no more sufficient to address the problems of today's fast changing society. At IITH students are provided with a plethora of choices, from which they diligently choose with the help of a faculty advisor. Courses that last for a semester are almost a foregone story at IITH. All undergraduate programs have started offering courses that are of smaller credits; called the fractal academics; very carefully designed to keep the enthusiasm of the students and to keep them in pace with the current scientific, technological and industrial scenarios. These courses are distributed the time from the first to the eighth semester.

Another academic initiative at IITH is the double major. In addition to the requirements from the parent branch, a student can get a major from another department by successfully completing 24 core credits. The options for a minor and honour's degree also exist on top of a double major. Moreover, the curriculum at IITH allows an enthusiastic student to credit any number of courses from the spectrum of lectures offered at IITH.

MOUs AND

COLLABORATIONS

THRUST AREAS OF COLLABORATIONS

IITH faculty members are currently involved in a large number of research projects which require interdisciplinary approach:

- Nano Science and Technology
- Next-gen Communication Systems
- Digital Manufacturing
- Energy and Environment
- Sustainable Development
- High performance and Multifunctional materials
- Smart mobility
- Health Care
- Gene editing
- Cyber Security
- Cyber Physical Systems
- Combustion and Propulsion
- Industry 4.0 and Digital Fabrication
- 5G and IoT

OTHER AREAS OF COLLABORATIONS

Faculty members from different departments are involved in the collaborative research in the aforementioned areas and offer several courses that cover various aspects of these topics.

All these areas are very broad in its application and several faculty members from various departments are involved in executing a number of projects that fall under these thematic areas.

MEMORANDUM OF UNDERSTANDING

Refer to the below listed link to find a listing of all the National and International MOUs:

<https://iith.ac.in/research/mous/>

WHAT'S NEW?

IITH went on to introduce a few industry oriented interdisciplinary M.Tech Programs:

01. ADDITIVE MANUFACTURING

The course is designed to equip students to understand and advance AM by combining fundamental understanding of the underlying science along with a specialized study of different processes and technologies.

The course will also focus on capturing the interdisciplinary nature of the AM through providing hands-on experience with designing, adapting and building parts using current AM technology.

02. ENERGY SCIENCE AND TECHNOLOGY

The goal of the program is to impart and foster knowledge in energy research and development and state-of-the art approaches to shape the future of energy. Broad areas include, but are not limited to: Fossil Fuels, Power Engineering, General Energy, Renewable Energy, Energy Storage, Nuclear Energy and so forth.

03. E-WASTE RESOURCE AND ENGINEERING MANAGEMENT

With rapid change in technology and more digitalization in the

world, there is an explosive growth in the electronics industry and subsequently that has led to enormous growth in electronic waste (e-waste). E-waste contains many hazardous and toxic substances which have serious health and environmental effects, if not managed properly. Therefore, it becomes essential to learn about various technological interventions to manage, reduce and recycle e-waste for its safe disposal.

This particular M.Tech. program will catalyse the efforts towards E-waste management in the country and also worldwide. The program will provide a necessary support for several of Government initiatives in this direction such as Skill India, Swachh Bharat, Waste-to-Wealth initiatives.

04. INTEGRATED SENSOR SYSTEM

The course work will provide all necessary basic and applied skills for design, fabrication and testing of integrated sensor system in all area of importance by using the concept of interdisciplinary science and technology.

The overall program will develop manpower and technopreneurs in the area of sensors technology.

05. MEDICAL DEVICE INNOVATION

The course, MTech in Medical Device Innovation, is intended for

candidates, who passionately feel for finding innovative solutions for the problems faced by current health industry.

The students will be trained for finding problem statements in health industry; discuss the solutions among engineers, doctors and designers; and come up with a solution to fulfill the degree requirements.

06. NETWORK AND INFORMATION SECURITY

The new M.Tech. programme in Networks and Information Security is launched keeping in mind the national interest and demand in this area. The programme will provide advanced training in research and development in the theoretical and practical aspects of networks and information security.

07. POLYMERS AND BIOSYSTEMS ENGINEERING

This is a truly interdisciplinary program combining several facets of modern soft materials and biological systems engineering.

The program strives to expose the students to cutting-edge problems in industry and simultaneously provide them a strong fundamental understanding of the engineering principles involved. Lectures by industrial experts is an integral part of the program. The program features hands-on training on research projects that have potential applications in healthcare and allied sectors.

08. SMART MOBILITY

IIT Hyderabad and DST-NM-ICPS Technology Innovation Hub (TIH) on Autonomous Navigation and Data Acquisition Systems (UAVs, RoVs) Jointly offers a 2 Year M. Tech program on Smart Mobility.

STUDENTS AND FACULTY RAPPORT



Well qualified, and with the right mix of experience and youth, our faculty members are zestful, energetic and creative, and share a common goal to put IITH on the international map as a hub for technological innovation. Students to faculty ratio of 14:1 ensures close interaction between the students and faculty. Most of the faculty are equipped with research and/or industrial experience from reputed foreign or national research laboratories and are involved in cutting edge research with major publications in reputed international journals. Our faculty members advise both industry and government organizations through consultancy projects. They are also involved in Out-Reach Courses which include short courses for the industry professionals. Furthermore, workshops are held under Technical Education Quality Improvement Programme (TEQIP).

Our students and research scholars are not only academically brilliant, but also national & international scholarship awardees. They are nationally recognized chess players, Olympiad winners, NTSE (National Talent Search Examination) and KVPY (Kishore Vaigyanik Protsahan Yojana) Scholars, etc. who have a proven record of excellence & precociousness even before their entry into the Institute. A large number of our students have been awarded with various scholarships like TODAI (scholarship from the University of Tokyo) in association with Mori Seki Company Limited, IMCM (Institute Merit-Cum-Means).

PEAK INTO THE **STUDENT LIFE**

A healthy campus life plays a pivotal role in the all-round development of the students. Along with the intense academic schedule and brain-storming class hours, the students of IIT Hyderabad indulge in extensive sporting action.

ELAN FESTIVAL

The Technical-cum-Cultural Festival of IIT Hyderabad is the best exhibition of the management and organizational skills of the students. The internationally recognized event is very popular among the students all over the state. The students' active participation in cultural, technical and literary competitions has made it a grand success.

STUDENT GYMKHANA

Student Executive body called the 'Gym-khana' is a student governed body headed by a President, who along with the council, ensures smooth functioning of all the student affairs.

E-CELL

E-Cell is a group of entrepreneurs and seeks to solve real life problems and come up with really innovative and cool designs as a solution for the same.



N-VISION FESTIVAL

Nvision is the techno-management fest organised by the students of IIT Hyderabad with a motto of providing a platform to the technical enthusiasts of our country to explore, innovate and showcase their technical and engineering prowess.

Nvision started in 2011 and over the years it has gradually evolved from an inter-college festival to one of the most recognised techno-management fests of the country.

UNWIND WITH

CLUB ACTIVITIES

Clubs are the integral part of any college. The enthusiastic students of IIT Hyderabad have also formed many significant clubs like Sci-tech. Clubs which include Kludge, Infero, Electronica, Cepheid, Endeavour, Torque, Robotics along with the colorful Cultural Clubs enlisting Gesture, Movie Club, Photography Club, Rang de manch, Vibes. Regular cultural rendezvous have transformed the student community into a happy family where all major festivals are celebrated with pomp and gaiety. The Night Life revolves around the various workshops and competitions conducted by numerous student-managed clubs. To sum it up, life at Indian Institute of Technology Hyderabad is the IIT experience lived king size.



01. NATIONAL SERVICE SCHEME (NSS)

National Service Scheme (NSS) at IITH is aimed at providing each student with a significant context in which he/she can reach a deeper understanding of social reality in India today. As a part of this, the students in their leisure time visit nearby schools and hospitals to assist the government authorities.

02. SPORTS CLUB

IIT-Hyderabad provides full fledged facilities for all outdoor sports. A well equipped Gymnasium and regular practice has shown great results at Inter-IIT sports meets.

03. EK BHARAT SHRESHTHA BHARAT (EBSB)

EBSB is a programme for promoting national integration through systematic exchange between paired institutes in the cultural, literary and linguistic fields. We intend to learn the linguistic and cultural aspects of the home state of our paired institute, covering history, culture, language, cuisine, festivals, clothing etc. The EBSB club has been formed at IITH to carry forward activities under the programme with our paired institute, IIT Kanpur. We aim to celebrate a plethora of Indian festivals and customs (paying special attention to those of Uttar Pradesh) in ways which are both enjoyable and informative which would thereby educate our fellow students while having fun.

LOOSEN UP AT —

SHIRU CAFE



Shiru Cafe at the Indian Institute of Technology Hyderabad's campus is the first store outside Japan. The Cafe is manned by Japanese student interns and offers free beverages to IITH fraternity.

The mission of Shiru Cafe is to create a place where students can learn about the professional world and envision their future careers. Students enjoy free select coffee, tea and juice while learning about careers, companies and job opportunities.

HOW TO REACH

DIRECTIONS TO IITH



FROM THE AIRPORT:

- IIT Hyderabad can be reached by any authorized taxi in about 1 hour from the Rajiv Gandhi International Airport

Select Cab Services Contact Number:

Meru Cabs: 040 4422 4422

Dot Cabs: 040 2424 2424

Taxi for Sure: 040 4040 9090

Ola Cabs: 040 3355 3355

Yellow Cabs: 040 4646 4646

BY CITY BUS:

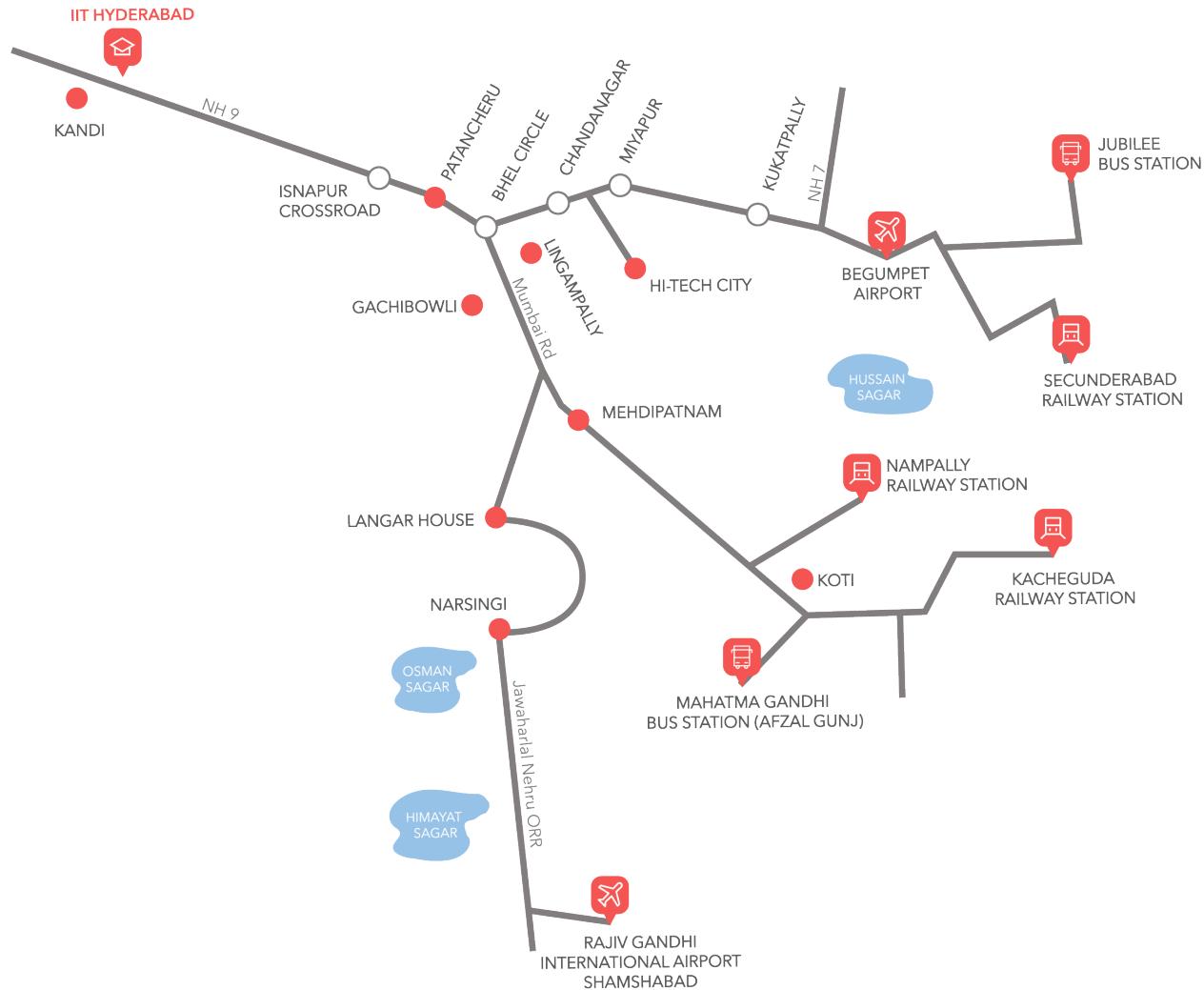
- Take city bus to Patancheru (No. 219 or 226). The journey takes about 1.5 hours. Patancheru is about 18 km from IIT Hyderabad.
 - At Patancheru Bus Station, board the Sangareddy Bus and get a ticket for IITH.
(Patancheru - Isnapur - Rudraram - Kowlampet - IITH Bus Stop - Kandi - Sangareddy)
 - IIT Hyderabad bus stop will come before Kandi village bus stop.

Bus Numbers: Secunderabad to Patancheru 219-216, Koti to Patancheru 218, 222, 217, Jubilee Bus Station to Patancheru 226, Chandanagar to Patancheru 219, 218, 222

BY TRAIN:

- Take MMTS Local Train to Lingampalli station. Lingampalli is about 25 km from IIT Hyderabad.
- Take city bus from Lingampalli station (Platform 6 side) to Patancheru (No. 216)
 - At Patancheru Bus Station, board the Sangareddy Bus and get the ticket for IITH. (Patancheru - Isnapur - Rudraram - Kowlampet - IITH Bus Stop - Kandi - Sangareddy)
 - IIT Hyderabad bus stop will come before Kandi village bus stop.

Note: Autos are also available from Patancheru to IITH Campus



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