

Offering Courses in - CSE, IT, ECE, EEE, AERO, MECH, CIVIL CSE (AI&ML), CSE (DATA SCIENCE), CSE (CYBER SECURITY)





 ENGINEERING RANK 151-200
 INNOVATION RANK 51-100



**PROSPECTUS 2024-25** 

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Prospectus 2024-25

## Welcome to Institute of Aeronautical Engineering

Institute of Aeronautical Engineering (IARE), Hyderabad was established in the year 2000 and is run by the Maruthi Educational Society founded by a devoted group of eminent professionals and industrialists having a long and outstanding experience in the educational system with the noble objective of promoting quality technical education. With a mission 'Education for Liberation', it is paving path towards great achievements in the field of technology.

It was first founded in 1994 as Institute of Aircraft Maintenance Engineering approved by Directorate General of Civil Aviation, Government of India, New Delhi offering certification program in aircraft maintenance engineering. To cover the wide field of Aviation, in the year 2000 B.Tech program in Aeronautical Engineering was started and has gradually transformed itself into an integrated multi-disciplinary technological institute.

At present, IARE is offering ten B.Tech programs and six M.Tech programs in engineering and Master of Business Administration. It is one of the most reputed colleges in engineering societies regionally and nationally.

The Institute is well known for its innovative spirit, intensive research and hands-on approach to solve real world problems, producing skillful engineers who are well received by industry and academia. Building on a strong foundation, the sustainability and high quality of the engineering and management programs have been assured. With the full support from our staff, It aims to be one of the leaders in the field of Engineering.



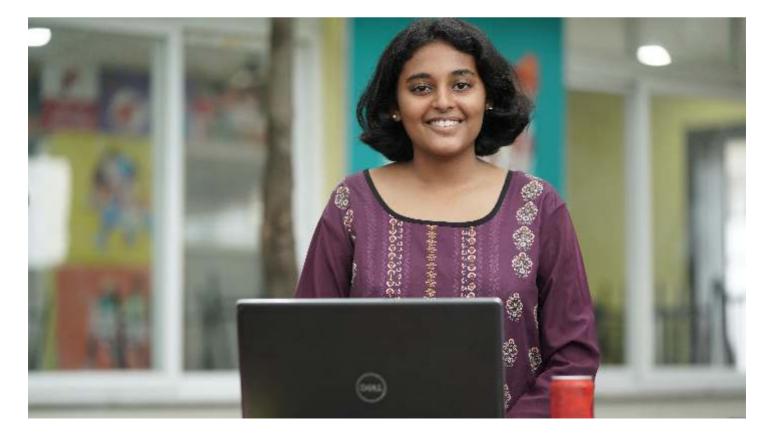
## Vision

To bring forth students professionally competent and socially progressive, capable of working across cultures meeting the global standards ethically.

## Mission

To provide students with an extensive and exceptional education that prepares them to excel in their professions guided by dynamic intellectual community and be able to face the technically complex world with creative leadership qualities.

Further, be instrumental in emanating new knowledge through innovative research that emboldens entrepreneurship and economic development for the benefit of wide spread community.



# Institute Profile



Name	:	Institute of Aeronautical Engineering (IARE)
Estd. Year	:	2000
Managed by	:	Maruthi Educational Society, Hyderabad
Approved by	:	All India Council for Technical Education, New Delhi
NIRF Engineering	:	One among top 200 in engineering category, since 2017
NIRF Innovation	:	One among top 100 in Innovation category, since 2021
Accreditation	:	NBA accreditation for five B.Tech programs
		NBA accreditation for two M.Tech programs and MBA program
		NAAC A++ Grade with a Score of 3.62 on a four point scale.
Autonomy	:	Autonomous status from University Grants Commission (UGC), New Delhi
Affiliated to	:	Jawaharlal Nehru Technological University Hyderabad, Hyderabad
Campus	:	Dundigal, Hyderabad – 500043, Telangana
Distance	:	Secunderabad - 20 km; JNTUH, Kukatpally - 12 km
Phone	:	040 - 29705852, 53, 54
Mobile	:	8886234501, 8886234502
Email / Web	:	info@iare.ac.in / www.iare.ac.in



## Providing a Holistic Approach Towards Excellence

### **7**HOLISTIC DIMENSIONS

Institute of Aeronautical Engineering is a truly holistic place of learning, made up of 7 outstanding dimensions.

#### 1. Academic

Learns from world leaders and groundbreaking experts.

Invincible reputation for high quality education, research, active teaching staff, innovation, employability and facilities.

#### 2. Pedagogy

Curriculum prepares students for today's world.

Works with institute's community, business partners, and industry leaders to develop course content that meets the future needs of employers.

#### 3. Research

Learns from world researchers-goes beyond and performs differently.

Enhances learning and research as the connected aspects of students' experience, putting them close to the world-leading research that is changing lives of the communities we serve.

#### 4. Enterprise

Goes beyond the classroom and make innovative ideas take a concrete shape.

Provides resources to help one realize their dream. Offers entrepreneurial advice and opportunities for students to achieve this.

#### 5. Community Outreach

Committed to community engagement Works with supporting local organiza-

tions and public engagement activities.

Outreaches to the local community.

Gives students a chance to share their passion for science and engineering with others.

#### 6. Active traits

With technical clubs events and fests provides a unique student experience and can become expert by getting involved.

Dedicated center for personality development helps students to become self-aware of their personality traits and make an effort to excel in their professional and personal life.

#### 7. Support

Tap into a dedicated support network, tools, and resources.

Committed to help and support with a wide range of services, such as access to all the information digitally through student campus management system, learning management system, 24/7 high speed Wi-Fi environment to manage your time effectively.

# Management







#### Sri Marri Rajasekhar Reddy

Chairman

Sri Marri Rajasekhar Reddy, since his young age has shown great flair in managing and nurturing educational institutions. For him, quality is the way of life. He envisioned a technological revolution and committed himself to establish an institution, to foster technical and higher education. Under his dynamic leadership, IARE is reinforcing its position as an institution of eminence in Hyderabad and beyond

#### Sri Ch Sathi Reddy

Secretary and Correspondent

Sri Sathi Reddy is a visionary and industrialist. He is a post graduate in Mechanical Engineering from Osmania University. MTE industries, established in 1984 has risen, flourished, and gained international recognition for manufacturing and exporting CNC machines under his leadership. He has also established successful engineering and pharmaceutical institutions. He is one of the co-founders of IARE.

#### Sri B Rajeshwar Rao

Executive Director & Treasurer

Sri Rajeshwar Rao is an outstanding entrepreneur with more than three decades of experience in spearheading and managing educational as well as private sector enterprises. He is the founder of Sri Rama Nonferrous Foundry and vice chairman of The Kranthi Cooperative Urban Bank Ltd. Since the inception of IARE, he has left no stone unturned to provide the best infrastructure and facilities on a par with the industry standards.

# Principal's Message

#### Dr. L V Narasimha Prasad

PRINCIPAL Professor of Computer Science and Engineering

#### **Experience: 32 Years**

Phone: 9490182900, 9703618753 Email: principal@iare.ac.in

#### Welcome to IARE!

In the fast-paced ever-growing markets with global outlook, the demand for well-trained multi-skilled engineers and entrepreneurs has augmented. The boom of competition in the industry has increased the standards that define engineering. Institute of Aeronautical Engineering always strives to excel in both technical and managerial areas. Over the past 23 years, our enthusiastic alumni placed in prominent companies have made us proud. With the visit of many leading companies, a significant growth in the placement over the years is observed. We encourage students to go beyond academic knowledge and master life skills. Our students have always set high



benchmarks, competing with students all around the globe. In a short span, we have made a impactful mark in the corporate world.

In line with the institute's vision and mission, we aim at providing excellent academic ambience, student centric teaching-learning process, state-of-the-art infrastructure, highly qualified and experienced faculty, and an overall dynamic and disciplined workplace. To keep pace with the fast-emerging technologies and rapidly changing world around, we instill and nurture leadership qualities in our students.

#### Wish you a happy learning!

# Rankings and Accolades



#### **Engineering Category**

The Institute is consistently finding its position in Engineering rankings of NIRF, as one among the top 200 engineering colleges in the country for the past six years in a row.

In Engineering Category of National Institutional Ranking Framework (NIRF) - 2023, Ministry of Education, Govt. of India, Institute of Aeronautical Engineering is ranked 151-200.

RANK

170

020

YEAR

RANK

139

RANK

151-200

RANK

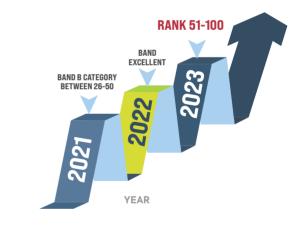
159

20

#### **Innovation Category**

The Institute is consistently finding its position in Innovation rankings of NIRF, as one among the top 100 engineering colleges in the country for the past three years in a row.

In Innovation category of National Institutional Ranking Framework (NIRF) - 2023, Ministry of Education, Govt. of India, Institute of Aeronautical Engineering is ranked 51-100.



### THIS ILLUSTRATES POSITIVE PERFORMANCE AND QUALITY STANDARDS WE MAINTAIN IN TEACHING, RESEARCH, EMPLOYABILITY, AND INNOVATION.

IARE's rating as given by the most read and widely acclaimed magazines:

RANK

201-250

22

RANK

151-200

- | India Today (54)
- | Competition Success Review (16)
- | Times of India (64) | BW Business World (60)
- | The Week (60) | Data Quest (78)
- Careers360 (AAAA) | Outlook (50)

# Why IARE – 5 Reasons

The calibre of the students and the excellence of the teaching and research at the institute have earned it National recognition

### Great student experience

Offers a supportive, well-equipped and creative environment to help students reach their full potential.

Numerous chances exist for students to participate in activities like conferences, design challenges, brainstorming, hackathons, and coding competitions.

#### Go on a semester-long work placement | Internship

Takes advantage of strong links with industry and go on for internship as part of their studies.

Many of the internships are paid, which earns valuable income during student studies at institute.

### **Excellent job prospects**

The visit of employers to the institute for placements is given top consideration. Before graduating, the student will be employed

Throughout the placement year, the specialized placement team provides guidance and assistance to students looking for a placement.

Most prominent employers include Amazon, EY, Capgemini, TCS, Infosys, IBM, DBS, NTT Data, Wipro, Cognizant, Accenture, Mphasis, LTI, TATA Technologies, TATA Advanced Systems and so on.

### Taught by top researchers

Taught by top researchers

The majority of our teaching staff is actively involved in research, which demonstrates that courses are periodically updated and one will profit from talks on the most recent developments in engineering. Being taught by a subject matter expert is motivating.

Having taken a detailed investigation of capabilities and strengths, Institute has identified seven Research Focus Areas (RFAs).

- Aerospace Engineering
- Artificial Intelligence
- Data Science and Analytics
- Energy and Materials
- Health and Life Sciences
- Precision Manufacturing
- Assistive Technologies

Choose a final year project in one of these areas, working closely with an active researcher in the field.

### Highly ranked

Brand name and most preferred institution which has a reputation in research and teaching excellence.

According to NIRF India Rankings (Engg.), IARE is among the top 200 (139th position in NIRF-2019, 170th position in NIRF-2020, 159th position in NIRF-2021, 201-250 Rank Band in NIRF-2022, and 151-200 Rank Band in NIRF-2023),

Institute is ranked among top 100 in the country by the popular magazines India Today, CAREERS360, Outlook, THE WEEK, Data Quest and BW Business World.

The Institute of Aeronautical Engineering (Autonomous) is eager to welcome students and support them as they pursue a variety of career goals, including those of engineer, scientist, inventor, designer, builder, and great thinker.

# Why Study at IARE

#### Leadership in one of India's fastest growing regions

Hyderabad is India's one of the largest and fastest growing metropolitan city which contributes to the economy. In this culturally diverse hub of international education, technology, business, industry and innovation, IARE global links are creating unlimited opportunities.

### Everything we do revolve around our students.

Institutes student-centered approach offers you the choice of on-campus and flexible study options combined with work-integrated learning. Through work experience, placements, internships, and volunteering opportunities, you'll get the real-life experience, practical skills, and knowledge is achieved for a successful career in future.

#### The impact of research is global

Learning and research as the connected aspects of students' experience, puts them close to the world-leading research that is changing lives of the communities It serve.

#### Facts and figures

IARE consistently ranks in the country's top 200 institutions that hint information about teaching, research, innovation and employability. It is one of the most popular colleges in the state of Telangana, India, attracting on average top 5% of EAMCET aspirants, and our students are among the most accepted by employers across the globe. 100% of our B. Tech programmers are NBA accredited.

#### Partners in learning

Unlike the conventional approach to teaching, pioneering model of cocreated learning treats students as partners in their education empowering students to share their ideas and facilitate their creativity.

### The curriculum equips students for the modern world

Works with community, business partners, and industry leaders to develop course content that meets the needs of employers as well as the jobs of the future, and responds to the challenges of a global workplace.

#### Embrace technology enriched learning

From innovative social learning spaces, online learning environment and use of digital technologies to oncampus next-gen computer laboratories and state-of-the-art research facilities, It is adopting new and emerging technologies to provide richer educational experience.

### Advanced opportunity and unlimited success

From advanced training on technologies to internationally recognized industry or business certifications, internships, and student exchange opportunities, provides multiple pathways for academic and professional success.

#### Globally focused and connected

With growing reach and reputation, institute offers the opportunity to travel, learn, and work in different places through global internship, work-placement programs and participation in international competitions/conferences/events.

#### Receiving amazing accolades

IARE is one of the top private engineering colleges in India which completely focuses on innovative and visionary aspects of each student. It welcomes students to live in a world beyond the classroom to explore their inner skills.

Active participation in National / International Collegiate Design Series (CDS) competitions take students beyond textbook theory by enabling them to design, build, and test the performance of a real vehicle / device and then compete with other students from around the globe in exciting and intense competitions.

#### International collaboration

Collaborations, with top institutions in USA, Austrlia, Singapore, Malaysia, Taiwan, Indonesia, Thailand, Vietnam and UK, to carry out activities ranging from joint degrees, exchange programs, internships, summer semester courses, full semester internship, joint research, etc., make IARE a most favored destination.

# Admission Procedure

#### **B.Tech Programs**

#### Category 'A'

Admissions under Category 'A' (70%) are made by the Telangana State Council of Higher Education through a common entrance test TS EAMCET.

#### Category 'B'

Admissions under Category 'B' (Management / NRI - 30%) are done based on merit as per the guidelines of TSCHE, Hyderabad.

#### Economically Weaker Section (EWS)

Admissions under EWS is 10% against category 'A' seats.

#### Lateral Entry into II Year B.Tech

Diploma holders are admitted directly into the second year of B.Tech to the extent of 10% of the intake based on the rank obtained in the Engineering Common Entrance Test (ECET), under lateral entry scheme conducted by Govt. of Telangana.

#### M.Tech / MBA Programs

Admissions to the M.Tech programs are made through both Category 'A' and Category 'B'. Category 'A' admissions (70% of the seats) are made based on a valid GATE score / Rank obtained in TS PGECET common entrance test conducted by the Government of Telangana. Category 'B' admissions (30% of seats) are done on the basis of merit as per the guidelines of TSCHE, Hyderabad.

In case of MBA, 70% of the seats are filled by ICET Convener and 30% of the seats are filled based on merit as per the guidelines of TSCHE, Hyderabad.

### This is a great time to study

Education prepares students for today's world.



IARE collaborates closely with professional organizations and business sectors to guarantee that students who take our courses gain the knowledge and abilities that employer's value.

# Courses Offered

#### **B.Tech Programs**

- 1. Aeronautical Engineering
- 2. Computer Science and Engineering (CSE)
- 3. CSE (Artificial Intelligence and Machine Learning)
- 4. CSE (Data Science)
- 5. CSE (Cyber Security)
- 6. Information Technology
- 7. Electronics and Communication Engineering
- 8. Electrical and Electronics Engineering
- 9. Mechanical Engineering
- 10. Civil Engineering

#### **M.Tech Programs**

- 1. Aerospace Engineering
- 2. Computer Science and Engineering
- 3. Embedded Systems
- 4. Electrical Power Systems
- 5. Computer Aided Design and Manufacture
- 6. Structural Engineering

#### Management

Master of Business Administration



## Autonomous Structure

Autonomy conferred in 2015 helped this institute to design its curriculum to infuse greater academic discipline and to match industry needs. The results, being no less impressive than the concurrent JNTUH system, have been a source of encouragement and confidence building for the organization for its path breaking steps.

In the continuous pursuit of academic excellence and creating a student-friendly learning environment, the fully flexible Choice Based Credit System (CBCS) is implemented which allows students to add or drop courses to suit the pace of fast and slow learners.

Institute serves dual purpose of building a solid foundation of knowledge and enhancing confidence, creativity, and innovation amongst students.



### **Salient features**

- → Choice in the selection of courses for each semester
- Choice in the selection of number of courses (Accelerated Courses) per semester
- → Ample opportunities to do interdisciplinary courses
- ➔ Freedom to choose minor / honours courses for specialization
- Special care for slow learners by offering important / common courses in all semesters
- → Opportunity of undergraduate research experience
- Provision for Full Semester Internship (FSI) in VII or VIII semester in industry / abroad
- Transfer and / or waiver of credits for the students who may spend one semester in any academic institution of repute in India or abroad
- ➔ Abundant options to choose credit-based courses from self-learning MOOCs
- ➔ Problem solving skills from first year onwards
- ➔ Imparting coding skills from first year onwards
- Ample opportunities to do internships in Research Centres, Innovation Centre, IT Park, and Start up Park

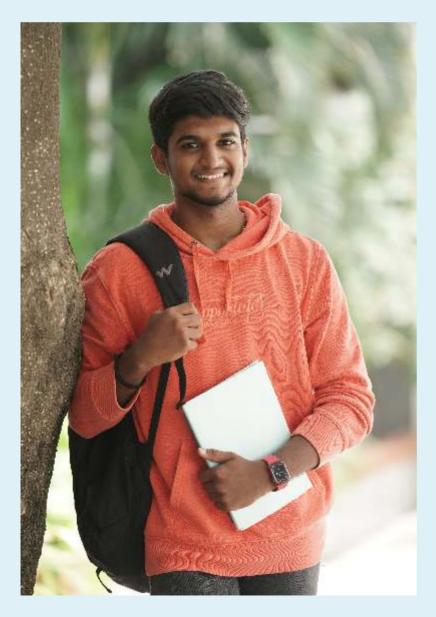
#### **ADDITIONAL LEARNING**

Provision of Honours and Minors available to students as add on to the base level B.Tech degree.

# Accreditations

## NAAC

Accredited by National Assessment and Accreditation Council (NAAC) for a period of 5 years with a CGPA of 3.62 on a 4 point scale at A++ Grade





Five B.Tech, Two M.Tech, and MBA programs are accredited by the National Board of Accreditation (NBA), New Delhi.

#### NBA Accredited Programs (B.Tech):

- Aeronautical Engineering
- Computer Science and Engineering
- Information Technology
- Electronics and Communication Engineering
- Electrical and Electronics Engineering

#### NBA Accredited Programs (M.Tech/MBA):

- M.Tech in Computer Science and Engineering
- M.Tech in Embedded Systems
- Master of Business Administration (MBA)

Students studying in institutions with NBA accreditation may be guaranteed that they will receive education that strikes a balance between excellent academic quality and professional relevance, ensuring that programs, activities, and processes take the needs of the corporate world into consideration.

# Quality Policy

Our policy is to nurture and build, diligent and dedicated community of engineers providing a professional and unprejudiced environment, thus justifying the purpose of teaching and satisfying the stake holders.

A team of well-qualified and experienced professionals ensures quality education with its practical application in all areas of the Institute.

#### **Students**

Student community continually innovates and excels in all spheres from academics to research, innovation to entrepreneurship. Together, the students make up a marvelous pool of diverse interests and talent that thrives on the rich cultural, recreational, and social opportunities on our campus. Students are encouraged and fully financed for participating in various national and international competitions. The students who participate in these competitions spend hours working tirelessly on designing their models. Their dedication shines through the results. Recognition and rewards for excellence encourage healthy competition and motivate students to go an extra mile.

The IARE educational experience not just develops students' intellect but also shapes their character. While our student community is enriched by its diversity, there are certain values that we seek to inculcate in everyone who study here. All IARE graduates are distinguished by a fierce commitment to their goals, integrity, and concern for the environment as well as for the society they live in.

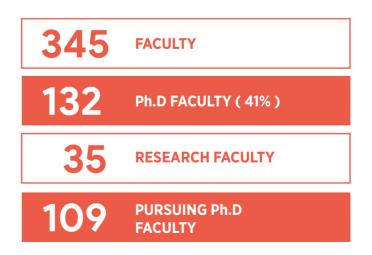
#### Faculty

Faculty is our most precious resource and one of the main pillars on which the institute is built (the other two are students and infrastructure). They develop and deliver the educational programs that bring excellent students to the institute. Faculty strive towards impeccable qualifications, extensive

Expertise and experience in their chosen fields, and an overriding commitment towards the welfare of the students.

The institute's culture of continuous improvement encourages faculty as much as it does to students. They are constantly given opportunities and platforms to update their skills and to stay in touch with new developments. The faculty enhances quality of teaching by visiting experts from both academic and corporate field. In fact, time and again, our faculty members have proven their ability to adapt and stay on the top of today's rapidly changing technologies.

Faculty role goes far beyond academics and influences every aspect of campus life. In addition to their teaching duties, faculty members guide and mentor enthusiastic students participating in other areas, such as research, innovation, entrepreneurship and sports / cultural pursuits. It is found that the majority of the students stay in touch with their faculty – calling for advice or to share their success stories from all over the globe.



# Total Student Development Program

Institute believes that to be the leaders in the real world, students must develop the intellectual breadth and creativity to tackle the challenges of increasing complexity, globalization, and rapid change. The Total Student Development Program (TSDP) focuses on every aspect of a student's personality, helping him/her to develop interpersonal, technical, and business skills

#### Web-Based Learning

IARE virtual learning environment provides quick online access to early Learning readiness videos (ELRV), placement preparation, power point presentation, lecture notes, suggested readings, tutorial question banks, definitions and terminology and other course information.

#### The Student Corner

The student corner is a Hub of central space where they can access all the information and support needed during their time in institute.



#### **Interpersonal Skill Development**

Creativity, lateral thinking, and communication/people management skills are essential components for progress in any sphere. Students are encouraged to develop these through goal-setting exercises, group discussions, mock interviews, and presentations.

#### **Technical Skill Development**

All students are given a conceptual grounding in core skills and application orientation through real-time projects to ensure their skills are concurrent with market needs.

Teaching Procedure: Lectures, practical laboratory sessions and project work are supplemented by problem solving workshops and tutorials. In a week, student can expect about 18-20 hours of lectures, five hours of problem-based workshops, nine hours of hands-on laboratory sessions, and three hours of small group tutorials. Additionally will be able to undertake independent work towards the Alternative Assessment Tool (AAT) and complete the necessary reading in preparation for writing reports and laboratory experiments.

#### Business / Skill Development

All students are taught essential business skills through industry interaction as well as innovative channels, such as marketing and finance clubs. Institute believes that the training will place them in good stead when they make the transition from employee to employer.

Institute looks always for people who can grasp new skills faster than our competitors. Students of IARE not only have a very strong technical and theoretical background but also have problem-solving /programming skills that they acquire from their experience on actual projects.

# In-house Quality Improvement Program

The in-house quality improvement program (IHQIP) aims at optimizing teaching and learning methods in the teaching-learning process. It works on three distinct fronts.

Sets up systems for accountability and continuous improvement in the classroom

Creates an environment where each student is constantly motivated to excel and reach new heights

Provides proactive career management facilities that help students find internships and campus placement jobs

#### Experiential Learning (ExL)

Experiential learning is, in essence, the process of developing new skills or knowledge through doing, rather than reading, watching or listening. It is the most natural and effective way that we learn. As such, experiential learning has much better rates of engagement, long-term retention and transferability than other methods of learning. Experiential learning lends itself to richer skill development.

In a world where technology is increasingly capable, the skills most need in students are ExL power skills, which relate to mindset, creativity, leadership and self management.

The Experiential Engineering Education Department (ExEEd) of IARE design and teach FIVE ExL power skills courses, to shape the students future.

- ExL Academic Success
- ExL Prototype / Design Building
- ExL Fabrication / Model Development
- ExL Project Based Learning
- ExL Research Based Learning

## **Digital IARE**

e-Governance Portals







### Learning Management Portal







### **Classroom Management**

#### **Course Information**

All published course materials and question banks are made available to the students before the semester begins. This ensures that they are wellaware of the course coverage and requirements in advance. We have found that this helps them to plan their activities and study schedules better, and maximizes their benefits from the curriculum.

#### **Progress Monitor**

We periodically provide detailed student progress reports that help students and their families monitor their ward's academic performance throughout the year. These reports can also be accessed online on our CMS login by parents / guardians sitting anywhere across the world. Students with learning difficulties are supported by Student Academic Support Program (SASP).

#### **Teacher Evaluation**

We believe that teachers must be evaluated by the students they teach. This ensures that there is no discrepancy between content delivery and the students' needs. The teachers are evaluated twice in a semester on a wide range of parameters that cover everything from their expertise in subjects to their contribution to the institute.



### **Performance Incentives**

#### **Rank Awards**

Students, who are ranked first in their respective classes, are felicitated and awarded on annual day function. The award comprises a citation, a gold medal, and a cash prize. This encourages competitive spirit and rewards to those students who constantly strive to do better.

#### **Student Assistantships**

Exceptional students get opportunity to work closely with their teachers by assisting them in their research and coaching the students who need extra help. Such experience always helps students to perform better.

#### **Distinction Awards**

Students, who get distinctions (CGPA more than 9) in any year, are given a cash award and an appreciation certificate. This small significant recognition goes a long way towards boosting a student's morale

# Impactful Research

The research activity in the campus is woven, in pursuance of its vision & mission statements around the philosophy of inspiring, innovating, and implementing benefit of the contemporary society. It unwinds itself into different fields, such as Photo-detectors, Solar cells, Gasfen sensors, environment, Agro bio construction, UAVs, aerospace, aerodynamics, CAD/CAM, CNC machining, tool design, welding, embedded systems, smart systems (IOT), data science, and low power VLSI digital system design. Emphasis is also being laid on business analytics, big data, machine learning, cloud computing, artificial intelligence, data analytics, wireless technology, cyber security, image processing, and nextgeneration networks

Number of Research Projects	Research Grants (Amount in Rs.Lakhs)	Junior Research Fellowships (JRFs)
14	891.66	23
Faculty Publications in Journals & Conferences	Patents	Student Paper Publications
1500+	256	1700







### **Research Facilities**

A facility is provided for both students and research associates to implement research-based projects under the guidance of faculty. It can be utilized by B.Tech and M.Tech students extensively for their project and research work.

#### **Research and Education Centres**

The following centres are established to allow faculty and students to share facilities, equipment, ideas, and innovation.

- → Center for Advanced Power Engineering Research
- → Center for Research on Alternative Energy Sources (Solar | Thermo Electric | Materials)
- → Center for Automation and Robotics (CAR)
- → Center for Aerospace Research and Development
- → Center for IoT, Sensor and Instrumentation Engineering
- $\rightarrow$  Center for VLSI and Embedded Systems
- → Center for Artificial Intelligence and Deep Learning Solutions
- → Center for Big Data Computing
- → Center for Cloud Application Development
- → Center for Developing AR/VR Solutions

# Makerspace

This 10,000 sq.ft. exciting Makerspace is furnished with equipment ranging from small 3D printers to large industrial machining centers, such as, Computer Numerical Control Vertical Machining Center (CNC-VMC), Cylindrical Grinding, Non conventional Electro Discharge Machine, industry-standard lathes, milling machines and metal sheet cutters, rapid prototyping technology multimaterial 3D printers, High speed double spindle PCB routing, 5 Axis Wood Routing with industry standards software cutters and vacuum casting systems.

#### Key features of the space include:

- $\rightarrow$  Product Design and Prototyping
- → Industry Standard Computer Aided Design (CAD) and Machining (CAM) Software
- $\rightarrow$  CNC Machining
- → Additive Manufacturing (3D Printing)
- $\rightarrow$  Metalwork and Welding
- $\rightarrow$  Electronics Design, Assembly, and Manufacturing
- → Industrial Metrology (Measurement and Verification)
- $\rightarrow$  PCB Routing
- $\rightarrow$  5 Axis Wood Routing



# Outstanding Facilities

Students and researchers are supported by extensive technical workshops and laboratories. They also have access to a wide range of industry-standard software.

#### **Specialized Equipments**

- → HPT-32 Aricraft
- → Beechcraft Baron B55
- $\rightarrow$  Cessna 172 Flight Simulator
- → Low Speed Subsonic Wind Tunnel
- $\rightarrow$  Micro Gas Turbine
- $\rightarrow$  Puckling of Structs
- → Computerised Universal Testing Machine
- $\rightarrow$  3D Printing Machine
- $\rightarrow$  6 Axis Robotic Arm
- $\rightarrow$  Planing and Milling Machine
- $\rightarrow$  Rolls Royce Engine
- $\rightarrow$  IOT and Applications
- → NI Instrumentation
- $\rightarrow$  PCB Design and Fabrication
- $\rightarrow$  High Voltage Engineering
- $\rightarrow$  Digital System Design
- $\rightarrow$  Delta PLC Arm
- → Cadence VLSI Design
- $\rightarrow$  CNC Machine Center
- $\rightarrow$  CNC Turning Center
- → Fanuc CNC Simulator
- $\rightarrow$  EDM Rapid Drill
- $\rightarrow$  Lazer Cutting Machine

- $\rightarrow$  Atique Testing Machine
- $\rightarrow$  Tribology Test Rig
- → Electro Hydraulic Test Rig
- → Muffle Furnace
- → Magnetic Stirrer with Hot Plate
- → Digital Magnetic Stirrer with Hotplate
- → Digital Ultrasonic Cleaner
- $\rightarrow$  Muffle Furnace: Digital
- → Fume Cupboard
- → Hydraulic Press
- → Agate Motor and Pestle
- → Cole-parmer Mortar and Pestle Set
- → NI ELVIS/NI MyRIO/NIDAQ
- → AR/VR Augmented RealItiy Virtual Reality

#### **SOFTWARE PACKAGES**

- Hyper Mesh , Unigraphics
- XiLinx/KeiL/PSCAD
- Solid Works
- Sales Force
- Cadence
- Computer-Assisted Language
- Software-Defined Radio
- Clementine
- Ansys
- Staad.pro
- Eclipse
- Nastran
- Adams
- NI LabVIEW
- Proteus
- Ibm Watson Analytics
- Rational Rose
- StarUML
- Rational Functional Tester

- o Catia
- o SAP
- Matlab
- Netbeans7.x with Java7
- Oracle
- Informatica
- Amazon and Aneka Cloud
- Python
- Node.js, Angularjs
- Autodesk Revit
- Hyper Works
- Cadem
- Multisim
- R/rstudio
- Tabulae
- o Unity
- Vivado

Design and manufacturing workshops Traditional soft modelling and prototyping facilities - the latest Computer Numerical Control (CNC) machining technology, industry-standard lathes, milling machines and metal sheet cutters

Rapid prototyping technology – multi-material 3D printers, laser cutters and vacuum casting systems

# Partnerships

(National / International)

### Academic MoU's

- ➤ Nanyang Technological University Singapore
- The University of Alabama Tuscaloosa, USA
- ✗ King Mongkut's Institute of Technology Bangkok, Thailand.
- Mingchi University of Technology Taiwan
- ★ National University of Kaohsiung Taiwan
- ➤ Nakhon Pathom Rajabhat University Bangkok, Thailand.
- University of Malaya
  Kuala Lumpur, Malaysia
- ✗ Institut Teknologi Bandung Indonesia
- ✔ Vietnam National University Ho Chi Minh City, Vietnam.
- Management and Science University Malaysia.
- Military College of Electronics and Mechanical Engineering Secunderabad, India



### Features of Collaboration

- $\rightarrow$  Development of collaborative research
- → Organization of seminars, workshops and other meetings on specific topics
- $\rightarrow$  Exchange of students
- $\rightarrow$  Exchange of research scholars
- $\rightarrow$  Exchange of faculty members

## Partnership with Ministry of Micro, Small and Medium Enterprises - MSME

#### **SKILL DEVELOPMENT PROGRAM**

MoU with MSME – Tool Room CITD (Central Institute of Tool Design)

- Full-time access to the laboratories and library
- Fee concession in certification courses and in-plant training
- Placement assistance
- Co author publications

### MOU with NSIC (National Small Industries Corporation)

- Industry centric, demand oriented training for skill / entrepreneurship development at NSIC
- Tailor-made training programmes
- Facilitation of successful trainees for placements









### IARE - Technology Business Incubator (TBI)

(Supported by Ministry of Micro, Small & Medium Enterprises)

The 'Support for Entrepreneurial and Managerial Development of SMEs through Incubators' program is a component of ASPIRE – A Scheme for Promotion of Innovation, Rural Industry and Entrepreneurship – launched by the Ministry of Micro, Small & Medium Enterprises (MSME), Government of India.

Objective of this program is to promote emerging technological and knowledge based innovative ventures that seek the nurturing of ideas from professionals beyond the traditional activities of Micro, Small & Medium Enterprises (MSMEs). It aims at nurturing innovative business ideas (new and/or ingenious technology, processes, products, procedures, etc.) which could be commercialized in a year.

IARE TBI is one of the approved Technology Business Incubators (TBI), through which applications for MSME scheme can be submitted.

### BENEFITS

Start-Ups / SMEs can receive grant up to Rs 6.25 lakhs and further possible financial assistance up to Rs 15 lakhs.

## Technology Innovation and Incubation Center(TIIC)

"Success is not just about getting a degree, but developing critical thinking and leadership skills to support a successful career"

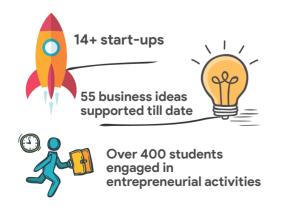
### "It's about learning skills for your chosen life, not just a job"

"Succeed in College - Succeed in Life"

A dedicated body Technology Innovation and Incubation Center (TIIC) encourages the students to develop sustainable business ideas and power through the initial stages for a profitable business venture.

The entire process, from inception and incubation to final execution, is monitored under the guidance of industry experts and faculty members. Having fast pace expertise in engineering and management to its advantage, the institute has been able to rise to the occasion and provide students the necessary inputs to manifest their innovative ideas into reality.

This center provides physical infrastructure and support system necessary for business incubation activities to network them with seed funders, angel investors, and venture capitalists.







BIO-INSPIRED MICRO AIR VEHICLE





#### **Start-Up Initiatives**

- → To prepare students to gain benefits from Government of India's 'Start-Up India' programme
- →To encourage Science and Technology students to choose entrepreneurship as their careers
- →To motivate students to convert their Detailed Project Reports (DPRs) and projects into viable B-plans
- →To create a common virtual platform to submit and make students' projects nationwide
- →To inculcate socially responsive behavior among the student aspirants interested in launching Start-Ups
- →To train students of rural background in identifying business opportunities in their local areas
- →To orient students as to how they can conceptualize social business Start-Ups that will address social issues
- →To provide handholding support to students for launching their Start-Ups during the entire course of their study
- →To equip students with the necessary skills for managing their business enterprise

IARE promotes entrepreneurship and devises ways and means to instill business acumen in students who seek to become entrepreneurs after their graduation. Student entrepreneurship support service is a vibrant platform where the students are constantly encouraged to generate business ideas in tune with the changing demands in the native and global markets and trained to test the viability of launching their startups. The TIIC regularly organizes enterprise internships, seminars and workshops by business experts from diverse business fields.

#### The Science and Technology Start-Up park offers assistance in

- $\rightarrow$  Developing business plans
- $\rightarrow$  Testing business viability
- → Preparing project reports and presentations for venture capitalists and evaluators
- → Facilitating the documentation process required for formal registration of company, logo, copyright, and patent etc. Lending a
- hand with feasibility studies, market research / survey, market and trend analyses, industry analysis, assessing economic viability, product/idea design, overcoming developmental impediments and other related activities
- $\rightarrow$  Providing capital investment

#### Partnership with National Research Development Council - NRDC

A Memorandum of Agreement (MoA) has been signed between National Research Development Corporation (NRDC), an Enterprise of Department of Scientific & Industrial Research, Ministry of Science Technology, Govt. of India and IARE. IARE and NRDC shall work in partnership for knowledge transfer and commercialization of research and projects done by the students.



# Placement and Training Center

Knowing your alternatives for a future profession is crucial once your undergraduate or graduate studies are complete. To keep its commitment to each job seeker, the Placement and Training (PAT) centre organizes and manages the campus placement program. PAT Center goes above and beyond in offering workshops or training programs relevant to placement to polish the abilities of students. Institute often invites academic experts and qualified soft skills trainers from the business world to help students get ready for placement activities.

The PAT centre has an exceptional track record for developing a solid placement record during its on-campus push and luring more and more MNCs from across the world. It also consistently maintains an upward curve in terms of the percentage of qualified students placed.

Every year, 62 firms from the software and core engineering industries visit IARE. Additionally, the PAT is effective in securing internships and projects focused on the industry for undergraduate and graduate students at numerous reputable MNCs. Alumni from IARE today can be found holding prestigious positions in top businesses all over the world.



### Placement and Training Center

# Our formula for student's employability Quality Education + Employability Skill = Student Employability



#### OUR TALENT TEAM IS A DEDICATED RESOURCE FOR STUDENTS, AND OFFERS A RANGE OF SERVICES, INCLUDING

- → One-to-one support
- → Drop-in sessions for CV, application and personal statement checks
- $\rightarrow$  Skills development sessions (200 hours)
- → Mock interviews

- → Assessment centre and psychometric testing training
- → Employer networking events
- → Placements and paid internship opportunities

# Placement Opportunities



Some of our recruiters

amazon	<epam></epam>	amadeus
JŚW	sears 👧	<b>XDBS</b>
	EY	<b>Exercaler</b>
WILEY	accenture	TECHNOLOGY
Capgemini	Cognizant	Deloitte.
virtusa	TATA TECHNOLOGIES	CONSULTANCY SERVICES
TATA ADVANCED SYSTEMS	<b>†i.</b> HEXAWARE	IBI
LUMEN.	<b>Mphasis</b> The Next Applied	LTI
tvarana≫	T DeltaX	Contracting Legato
Tech Mahindra	TECHNOVERT	Smartsoc
B byteridge	<b>Q</b> Academor	
VERZEO	TATA POWER	CES

#### Number of Selections | Company | Salary Per Annum

11

EPAM

03

Rs. 12 Lakhs

ACCOLITE DIGITAL

### 10 AMAZON

Rs. 14-17 Lakhs

#### 13 DBS Rs. 8.9 Lakhs

217 ACCENTURE Rs. 6.5-4.5 Lakhs

#### DXC Rs. 4.5 Lakhs

219

Rs. 9 Lakhs

### 03

TATA ADVANCED SYSTEM Rs. 5 Lakhs

### 04

LUMEN Rs. 7.4 Lakhs

#### 51 LTI Rs. 4-6.5 Lakhs

### 06

**TECHNOVERT** Rs. 6.5 Lakhs

#### 20 YAMAHA Rs. 3 Lakhs

07 **HEXAWARE** Rs. 6 Lakhs

### 05 **TECH MAHINDRA** Rs. 5.5 Lakhs

04 OUEST Rs. 3.25 Lakhs

### 10 IBM Rs. 3 Lakhs

07

02 AMADEUS Rs. 11.5 Lakhs

38 EY Rs. 6.3 Lakhs

126 VIRTUSA Rs. 6-7 Lakhs

06 TATA TECHNOLOGIES Rs. 4.7 Lakhs

#### 05 LEGATO Rs. 5.76 Lakhs

01 DELTAX Rs. 7 Lakhs

05 VERZEO Rs. 4 Lakhs

**TOSHIBA** Rs. 4.5 Lakhs 04 ISW Rs. 9.5 Lakhs

02 DELOITTE Rs. 4.5 Lakhs

131 COGNIZANT Rs. 4-6.5 Lakhs

04 TVARANA Rs. 4 Lakhs

01 **SMARTSOC** Rs. 7 Lakhs

27 ACADEMOR Rs. 5 Lakhs 34 SEARS

Rs. 9 Lakhs

03 WILEY/EDGE Rs. 9 Lakhs

62 TCS Rs. 3.5-7 Lakhs

01 TATA POWER

Rs. 4.7 Lakhs

04

**MPHASIS** Rs. 3.25 Lakhs

01 BYTERDIGE Rs. 5.33 Lakhs

05 CES Rs. 3.5 Lakhs

## Participation in SAE Events

SAE Design Series competitions take students beyond textbook theory by enabling them to design, build, and test the performance of a real vehicle and then compete with other students from around the globe.

SAE leads the aerospace, automotive, and ground vehicle industries in providing the tools and insights to help the students launch a successful career.

- SAE Aero Design
- Formula SAE
- Baja SAE
- Supra SAE
- Bicycle Design SAE
- SAE Student Convention

**HONORS AND AWARDS:** IARE'S SAE Design Team (Aeronautical / Mechanical) is one committed to excellence. Every year, while competing against 45 to 135 teams international / national, our teams are continuously proven to be one of the best in the nation.

**SAE INDIA Aero Design Challenge** | May 20 – May 22, 2022 | Fort Worth, Texas USA. IARE ASTRA, secured 16<sup>th</sup> position in advanced class and IARE LAKSHYA at 11<sup>th</sup> position in micro class in overall standing of the SAE International ADC (East & West) 2022.

**SAE INDIA Aerothon 2021** - a virtual Aero Design Contest June 12 – 13, 2021 | Teams Ranks: Lakshya: 3, Agni: 13, Deca:15, Brahmos: 26, Abhyas: 46, Prudhvi: 55.

**SAE Aero Design East** (International) Advanced Class Award March 6-8, 2020 | Lakeland, FL, USA. Sixteen in Design Report, Fifteen in Technical Presentation, Top Ranked Indian Team (Nine in Overall)

**SAE INDIA Aero Design** Challenge | Feb 28 – March 1, 2020 | Bannari Amman Institute of Technology, Tamilnadu, India. Micro Class: First in Design Report, Second in Overall, Regular Class: Third in Overall.

**SAE Aero Design East** (International) Advanced Class Award March 8-10, 2019 | Fort Worth, TX, USA. Nineteen in Design Report, Eighteen in Technical Presentation, Top Ranked Indian Team (Seventeen in Overall).







**SAE INDIA Aero Design Challenge** | July 11-13, 2018 | Anna University, Chennai, India. Regular/Micro Class: First in Design Report, First in Technical Presentation, First in Innovation, Second in Overall.

**SAE SUPRA 2018** | JUNE 15-20, 2018 | Buddh International Circuit, New Delhi, India.

Cleared seven levels out of eight levels of challenges.

SAEI-SS 13th National Student Convention

March 23-24, 2019 | Bannari Amman Institute of Technology, Sathyamangalam, India

Eleven positions with five first, three second and three third awards.

Two batches for Software and 1 batch for Hardware division are selected for Grand Finale of Smart India Hakhathon (SIH) 2020, MHRD & AICTE, Government of India.

# Computing Facilities



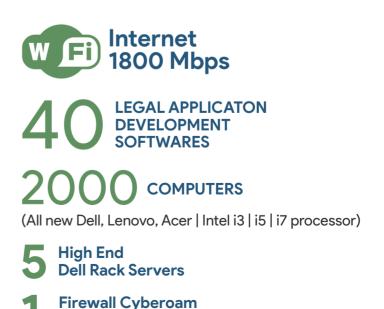






More than 1600 computers are housed in 42 cuttingedge computer labs at IARE, which provides the computing resources needed for academic, project, and research needs. This is made possible by a fibre optic backbone connecting the servers throughout the facility.

120 KVA uninterruptible power supply system with 480 KVA diesel green generator sets are exclusively catering to the needs of the computer center. Broadband 1000 Mbps internet facility is available through wireless connectivity.



500ing

# Infrastructure







SANGEET AUDITORIUM Air Conditioned 800 seating capacity



17 ACRES LAND 4,33,000 sft. BUILTUP AREA

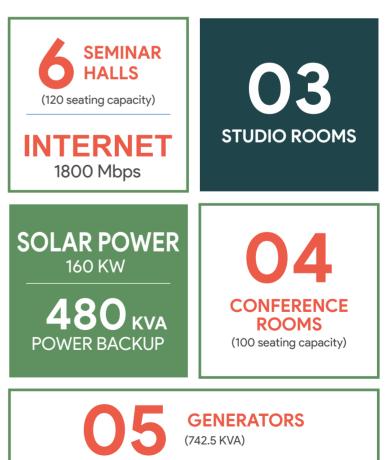


# Infrastructure



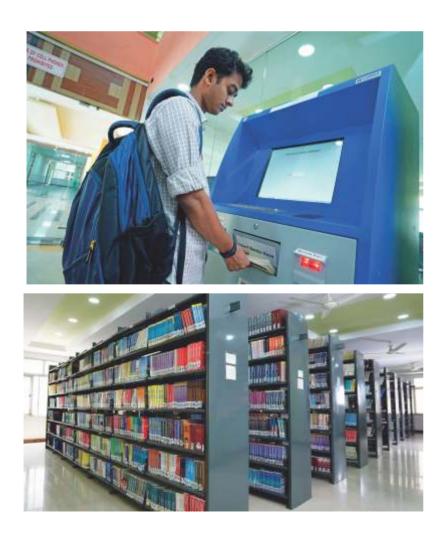
The 17-acre IARE campus is located in a lovely, peaceful setting that is perfect for education. The campus's infrastructure facilities are aesthetically pleasing, serene, and comforting. It is a completely selfcontained campus that has everything students could possibly need to pursue their dreams.

The geographical proximity to industrial and corporate hubs is an added advantage for students to liaise between studies and practical exposure, and also makes placements more fluid.



# Library

The contemporary digital library with a duplex design is completely computerized and equipped with bar-coding and Wi-Fi. The ability to borrow books whenever they want is made comfortable and convenient for readers by a fully automated library management system. Faculty members also have the option of uploading all of their lectures, question banks, lab manuals, and research notes to the institute's Intellect CMS repository in addition to these resources. With a simple key and a password, the pupils can access these.



57158 BOOKS 10432 E-RESOURCES 12502 SFT. AREA 1526 JOURNALS









# e-Learning Resources















Creation of e-Learning Readiness Videos (ELRV) was started in the year 2017 enabling the faculty to construct educational content for the selected courses of engineering.

Developed e-content learning resources are available through the Learning Management Portal -AKANKSHA as well as IARE YouTube Channel.

- $\rightarrow$  Videos are recorded in full HD  $\rightarrow$  Conduct of MOOCs allowing (capable of producing in 6K)
- $\rightarrow$  Covers skill development, skill enhancement and employability courses.
- $\rightarrow$  One-stop web and mobile based interactive online digital learning for active and slow learners.
- $\rightarrow$  High quality learning experience using multimedia on anytime, any where basis.

- easy access, monitoring and certification.
- $\rightarrow$  Peer group interaction and discussion forum to clarify doubts.
- $\rightarrow$  Hybrid model of delivery that adds to the quality of classroom teaching.

# Industry Institution Interaction

## **Consultancy Services**

Industrial consultancy center caters to the needs of students in terms of industrial consultation, and R&D services. In addition to the industry, institute engagement enables students to learn about cuttingedge engineering processes and technologies, which has a significant impact on the engineering curriculum and the eventual employment of young undergraduates and postgraduates in companies.

## Full Semester Internship (FSI)

Students have an opportunity to work on their project work to enrich their learning experience with hands-on internship programme for full duration of semester (either in VII or VIII semester) at leading organizations like Tata Advanced Systems, Cyient, MAQ Software, EPAM, Byjus, Aricent, CITD-MSME, and Aptroid and many others.

## Support Programmes

Gaps in curriculum in each semester / year are identified and bridged through short term courses, industrial visits, seminars, workshops, and conferences. Going beyond the classroom, these programs provide students with a "University plus" experience.

## Internships

Provides possible opportunities through varied Internships, Field projects, Field practicum and Industrial in-plant training to learn, understand and sharpen the real time technical/managerial skills required at the job.

# Professional Networking

Engineering professional student chapters aid students in expanding their professional networks. Students develop relationships with classmates, instructors, and academic role models from various universities and states.

- Institute of Electrical and Electronics Engineers (IEEE)
- Telangana Academy for Skill and Knowledge (TASK)
- Confederation of Indian Industry (CII)
- Association for Computing Machinery (ACM)
- Institution of Electronics and Telecommunication Engineers (IETE)
- The Indian Society for Technical Education (ISTE)
- Computer Society of India (CSI)
- Society of Automotive Engineers (SAE)
- Indian Concrete Institute (ICI)
- The Institution of Engineers India (IEI)
- The Institution of Mechanical Engineers (IMechE)
- Hyderabad Management Association (HMA)
- American Society of Civil Engineers( ASCE)

# Strong Industry Collaboration

IARE collaborates with a variety of businesses in the sector to train students and conduct cooperative research and other extension projects.



# Industry support laboratories

In order to cope up with market demands and equip the students to become successful in the field of data Integration, institute of Aeronautical Engineering, Hyderabad has partnered with Virtusa Corporation, a global provider of digital strategy, digital engineering, and IT outsourcing services and started its first Center of Excellence (CoE) to train the students on PL/SQL.

# **Center of Excellence**

To meet the increase in demand for Quality IT Engineers every year and to bridge the gap between Industry and Academics and also to quickly bring the curriculum and students on par with the latest industrial standards, the Institute of Aeronautical Engineering, Hyderabad has partnered with EPAM Systems India Private Limited, who specializes in service development, digital platform engineering, and digital product design to have Center of Excellence (CoE) to train the students on Java, Front end technologies and Automated testing using Java/ Selenium.

# intel. Center of Excellence

To prepare students for the ever-changing tech environment. Through the active development of a curriculum that adheres to Intel's standards, the Center of excellence bridges gap between academic theory and industry demands, providing students with a well-rounded skill set. This partnership marks a substantial advancement in cultivating professionals ready for the industry, ensuring students not only acquire theoretical knowledge but also gain practical skills essential for a prosperous career in the technology sector.

# Aeronautical Engineering

Aeronautical Engineering is one of the most challenging fields of engineering with a wide scope for growth and career excellence. Aeronautical engineers are prepared to develop new technologies for use in aviation, defence systems, and spacecraft. They are involved primarily in designing aircraft and propulsion systems and in studying the aerodynamic performance of aircraft design, manufacturing, operation, testing, maintenance and management of flight vehicles.

# Career focused

Embedding industry readiness in learners through engagement with industry experts

# SAE aero design

Working with the aero design world champions

# Employment

A huge range of potential employment within areas that include aerospace industry, manufacturing, automotive, consultancy and research.

A blend of aeronautical engineering with knowledge in computing continue to be among the most employable in the country Established in the year 2000, the department offers B.Tech program in Aeronautical Engineering and M.Tech program in Aerospace Engineering.

The B.Tech Program in Aeronautical Engineering has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2013, 2016, 2019 and 2022



Design is not just what it looks like and feels like, design is how it works

### YOU WILL LEARN

Aero structures: Principles of structural mechanics and analytical techniques to ensure a vehicle's structural integrity.

Aerodynamics: Fluid motion around a body moving through the atmosphere at subsonic and hypersonic speeds.

**Propulsion:** Basics of thrust generation by the application of aero/gas dynamics and thermodynamics.

**Flight control:** Analysis of flight, including techniques for vehicle guidance and stability, space vehicle trajectories and orbits.

Aerospace materials: Advanced materials used on the airframe and in propulsion systems.

Aerospace design: Preliminary design of the complete aircraft which emphasises systems integration.

#### **SKILLS YOU GAIN**

- → Aircraft System Design studies -Beechcraft Baron B55 by Textron Aviation and HPT - 32 from Indian Air Force
- → Flying Experience CESSNA Aircraft Simulator, Left Seat Inter Cockpit
- → Experimental Investigations Low Subsonic Wind Tunnel and Micro Gas Turbine System
- → Unmanned Air Vehicles (UAV's) Design, development and deployment
- → Finite Element Analysis IS Code and Standard Interpretation
- → Aircraft production Industrial drawing practice with CNC







# Computer Science and Engineering

Problem solving, a life skill that is crucial to both computer science and engineering, is its most significant component. The design, development, and analysis of hardware and software used to address issues in many business, scientific, and social contexts are topics covered by students. Because computers employ their problem-solving abilities to benefit people, CSE also has a substantial human component. With no prerequisites, students in our well-liked introductory programming courses start with the fundamentals. Following this, they study the mathematical underpinnings of computing, gain practical experience creating software and hardware, and select advanced courses in areas like human-computer interaction, computer graphics and animation, artificial intelligence, machine learning, robotics, data science, natural language processing, computer networking, computer security and privacy, and many more.

# Coding experience

Global program focused on introducing students to open source software development competetions

# Real time work experience

Opportunity to undertake full semester internship, a job, or any form of employment with paid internship

# Employment

Skilled computer science professionals are in high demand

90% employment with average starting salaries of Rs. 7 lakhs

Established in the year 2001, the department offers B.Tech Program in Computer Science & Engineering and M.Tech program in Computer Science & Engineering. The department is a recognized Research Centre under Jawaharlal Nehru Technological University, Hyderabad and conducts Ph.D programs in Computer Science since 2019.

The B.Tech Program in Computer Science and Engineering (CSE) has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2013, 2016, 2019 and 2022 and the M.Tech program in CSE got accredited by National Board of Accreditation (NBA) successively twice i.e. in 2019 and 2022.



Science is about knowing, engineering is about doing

### YOU WILL LEARN

#### Computer science fundamentals

Gain essential skills in programming, mobile app development, logic and data structures, software development, computer architecture and databases.

#### Web development

Learn full-stack web development, including front end and software development using the latest applications.

#### Big data management

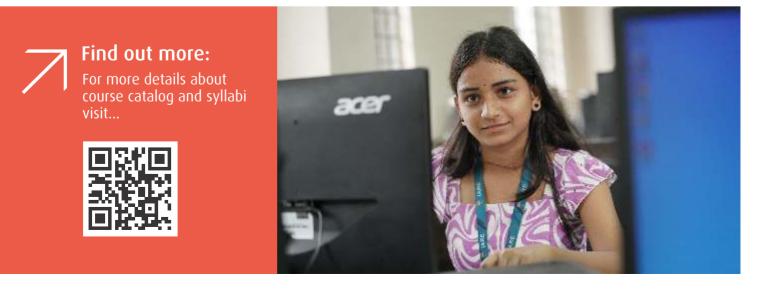
Learn the latest technologies for analysing big data, including Hadoop and Apache Spark, and learn how to leverage Amazon Web Services.

#### Artificial intelligence (AI)

Understand the historical foundations and fundamentals of AI as they apply to machine learning, game playing, state space search and rule-based expert systems.

#### **SKILLS YOU GAIN**

- → Deep knowledge of algorithms and data structures, and coding skills in languages like C, Java Python and open source technologies.
- → Analytical approach to create the code for automatic complex process and solve problems.
- → Design, implement, and evaluate computer-based systems, services and applications employing the methods of software engineering as an instrument to ensure quality.



# CSE (Artificial Intelligence and Machine Learning)

Wonder how Netflix predicts what its customers will enjoy? Wonder how health applications in your mobile devices are predicting your medical conditions? Wonder how your virtual assistants like Google, Siri and Alexa can do your daily work for you? Soon, your car will be able to drive itself faster and safer while you relax in the seat, but how?

That's where AI and ML will come in to play to teach the above situations, learn how they work and generate the best results while building some fascinating models. With massive computational power, big data, artificial intelligence and machine learning systems will manage, analyse and use the data far more successfully than ever before. This program combines key areas of artificial intelligence, machine learning and data science which are complementary areas of Intelligent Systems, where data science focusing on statistical techniques and Artificial Intelligence on algorithmic techniques. Both areas are in high demand in the tech industry and for Industry 4.0.

# Design and develop

Develop expert knowledge of, and the ability to design, complex machine learning and deep neural networks systems for use in industry.

# Enhanced knowledge

Integration of concepts, techniques and applications to enhance knowledge and skills in intelligent systems

# Employment

AI technologies are being increasingly adopted accross broad range of industry, creating demand per students who can help, realize the transformative potential of AI

Get ready for a fantastic placement opportunity

The increasing importance of Artificial Intelligence motivated the department of Computer Science and Engineering to offer a B.Tech program in Computer Science and Engineering – Artificial Intelligence and Machine learning (AI & ML) from the academic year 2020-2021.

Artificial Intelligence & Machine Learning is an emerging area of Computer Science and Engineering (CSE). The B.Tech Program in Computer Science and Engineering (CSE) has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2013, 2016, 2019 and 2022 and the M.Tech program in CSE got accredited by National Board of Accreditation (NBA) successively twice i.e. in 2019 and 2022.



AI Goes Above and Beyond Our Human Intelligence

What we want is a machine that can learn from experience...

### YOU WILL LEARN

**Computer science:** Get practical experience with opensource software and platforms, including Python, R and Hadoop. Understand database fundamentals, programming languages such as Java and Python, and cloud-based services offered by Amazon, Google, IBM and Microsoft.

Artificial intelligence (AI): Understand the historical foundations and fundamentals of AI as they apply to machine learning, game playing, state space search and rule-based expert systems.

**Problem-solving with AI:** Discover how research skills and deep learning algorithms are used to develop AI-based solutions to real-world problems.

**Machine learning:** Learn how to analyse data to design, implement and evaluate machine learning techniques for solving real-world problems.

**Deep learning techniques:** Explore deep learning techniques and apply them to AI functions like image recognition, machine translation and speech synthesis.

### **SKILLS YOU GAIN**

- → Create Expert Systems The systems which exhibit intelligent behaviour, learn, demonstrate, explain, and advice its users.
- → Implement Human Intelligence in Machines - Creating systems that understand, think, learn, and behave like humans Knowledge of computer science concepts in automation and specialist skills in artificial intelligence.
- → Data science provides meaningful information based on large amounts of complex data or big data.
- → Extract insights from data and report the results in data.







# CSE (Data Science)

Data science is a method for transforming business data into assets that help organizations improve revenue, reduce costs, seize business opportunities, improve customer experience, and more. This course is designed to meet the increasing demand for professionals who can manage both Business and Data Science aspects by analysing data and extracting valuable insights for decision making.

The subject of Data Science encompasses important disciplines like Statistics, Mathematics, and Programming. Artificial intelligence and machine learning technologies including deep learning, reinforcement learning, neural networks, etc. are the pillars of data science. They apply this knowledge to uncover solutions hidden in the data to take on business challenges and goals.

# Career focused

Data Science is rapidly emerging in organizations and the need for fully trained data scientist, analysts and programmers are in demand now more than ever.

# This is for you if

You have an enquiring mind, with a practical and analytical approach to problem solving

You are a knowledge seeker and want to learn how to tell story with data

# Employment

Data and information is recognized as a central to the economy business and cultural life of our society today

Exciting and fantastic placement opportunities

This B.Tech program in Computer Science and Engineering (Data Science) is specifically designed and offered by the department of Computer Science and Engineering in response to the rapidly developing field of Data Science from the academic year 2020-2021.

Data Scince is an emerging area of Computer Science and Engineering (CSE). The B.Tech Program in Computer Science and Engineering (CSE) has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2013, 2016, 2019 and 2022 and the M.Tech program in CSE got accredited by National Board of Accreditation (NBA) successively twice i.e. in 2019 and 2022.



### Transforming data into value

#### YOU WILL LEARN

**Computer science:** Get practical experience with opensource software and platforms, including Python, R and Hadoop. Understand database fundamentals, programming languages such as Java and Python, and cloud-based services offered by Amazon, Google, IBM and Microsoft.

Mathematics and statistics: Learn how to apply mathematics and statistics to data science problems. Process complex data and use it for the advantage of businesses and organisations. Learn using real data sets from our industry partners.

**Data science specialisation:** Choose a specialisation in bioinformatics, big data and cloud computing, or analytical science. Complete a research thesis or an intensive, industry-based learning project.

**Project management:** Learn how to manage large-scale IT projects and work in a team to develop a small-scale, industry-based system.

**Diverse electives:** Boost your knowledge through electives in business, health sciences, artificial intelligence and cyber security.

#### **SKILLS YOU GAIN**

- → Help organizations to respond faster Data science and analytics are used to assist aid organizations to respond more quickly in times of need, such as when the Swedish Migration Board used data science to make predictions about and determine national implications of emigration trends.
- → Enhance business decisions Business analytics can assist entrepreneurs and company executives in making timely decisions based on market trends. This can be coupled with analysis of online social media information to respond directly to consumer demands or create a more personalized advertising experience.
- → Develop "smart cities" Collect real-time data from a variety of sources, such as public transportation, traffic cameras, environmental sensors for parameters such as temperature and humidity, and social media interactions regarding local issues. The data can then be processed, analyzed, and utilized to improve city efficiency and cost-effectiveness as well as resident well-being.
- → Enable more accurate diagnosis through better analysis of images - Deep learning techniques have been applied to detect melanoma, the deadliest form of skin cancer. These methods improve the analysis of tissue images, promising a more accurate diagnosis than traditional techniques







# CSE (Cyber Security)

Cyberspace is a domain generated from the interconnection of computers and telecommunication networks around the world. It is used to store, modify, and exchange data via networked and related physical structures globally, regardless of physical geography. India has seen many attacks on its critical installations and the misuse of social media and internet has brought home the threat of cyber-terrorism, which cyber security experts say the country is poorly equipped to handle. A major challenge to cyberspace is security.

The Cyber Security program focuses on technology, people, information, and processes to enable assured cyber operations in the context of adversaries. The program is built on a technical foundation of computing and information technology.

# Design and develop

Students are prepaired with essential skills and knowledge to become cyber security specialist, learn how to tackle cyber crime and manage security systems

# Cyber security lab

Enable to explore the security landscape, undertake experiments in network security, mobile security and investigate threats in the context of of the internet of things

# Employment

It is impossible to ignore the importance of cyber security

Get Ready For A Career in High Demand

To address the industry's increasing demand for skilled security professionals in the public and private sectors the department of Computer Science and Engineering has designed the B.Tech program in Computer Science and Engineering (Cyber Security) from the academic year 2020-2021.

Cyber Security is an emerging area of Computer Science and Engineering (CSE). The B.Tech Program in Computer Science and Engineering (CSE) has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2013, 2016, 2019 and 2022 and the M.Tech program in CSE got accredited by National Board of Accreditation (NBA) successively twice i.e. in 2019 and 2022.



Technology trust is a good thing, but control is a better one

### YOU WILL LEARN

#### **Cyber Analysis**

Gain essential skills in Programming Environment, Analysing Business Data and Cyber Algorithms

#### **Operations Management**

Understand the Cyber security Operations Management and Risk and Network Engineering Fundamentals

#### Cyber Law and Data Security

Learn Cyber Law and Policy, Data Security and Information Assurance and Human Factors in Cyber security

#### **Computer Forensics**

Understand Strategic Communication Issues and Crisis Management, develop an Industry Project

#### **SKILLS YOU GAIN**

- → Build skills related tocyber threat intelligence, digital forensics and risk management technology environment.
- → In-depth knowledge of penetration testing, cyber forensics, malware reverse engineering and software vulnerability.
- → The socio-ethical and legal aspects of cyber Security.
- → Analyse and Identify new and existing cyberattacks and determine methods to mitigate them.







# Information Technology

Information Technology is a field of science that comprises all aspects of computing, including data storage, sharing of information and communications. It is a rapidly growing area that is radically changing the world by making it possible to do new way business, providing entertainment and creating art. Both software and hardware sectors are parts of Information Technology. Information Technology is fast becoming our way of life and one cannot imagine life without IT in today's world.

# Design and develop

Design IT products and services that solve real problems with focus on user centered design and big data analytics

# Real time work experience

Opportunity to undertake full semester internship, a job, or any form of employment with stipend

# Employment

Skilled computer science professionals are in high demand

90% employment with average starting salaries of Rs. 7 lakhs

## Established in the year 2001, the department offers B.Tech program in Information Technology

The B.Tech Program in Information Technology has been accredited by National Board of Accreditation (NBA) successively five times i.e. in 2008, 2011, 2016, 2019 and 2023



We are Changing the world with Technology

#### YOU WILL LEARN

#### Web and software development

Develop and build websites and software. Administer the front end, back end and server side of websites and IT systems.

#### IT systems analysis

Understand and analyse IT systems to deliver more efficient and effective IT solutions for your organisation.

#### Design

Learn about software, system and network design so you can contribute to making better programs and infrastructure.

#### Programming and networking

Learn the language of computers and how they communicate with one another to create working code and smarter systems.

# Project management, estimation, documentation and report evaluation

IT is more than just computers. Learning to manage projects and communicate effectively is a must in any organisational environment.

#### **SKILLS YOU GAIN**

- → Complete projects using relevant information technologies.
- → Develop/maintain/test business support and IT systems.
- → Project management skills including documentation and presentations for completion of project with varying complexities/ durations.
- → Identify priorities, manage multiple projects and meet deadlines.
- → Designing and building systems that will meet the needs of consumers today and in the future.







# Electronics and Communication Engineering

With the evolution of technology, Electronics and Communication has become an essential discipline that is required by every other industry. Hence, ECE is one of the most sought-after branches by students. It requires strong problem-solving and analytical skills, as well as a solid understanding of mathematics and computers in relation to electrical and electronic devices. This course focuses on four key areas in electronics: circuits and systems, signal processing, computing, and communication.

# System Design

Students benefit from access to high-end facilities including eCAD software – Pspice/ MultiSim/NI LabVIEW; simulators for chip design (Xilinx / Cadence); a wide range of development systems for microcomputer, microcontroller and embedded systems; digital signal processing (DSP) boards; rapid prototyping equipment with 3D printers and laser cutters – all of which allow to better understand how the theory they have learnt links to real workplace scenarios.

# Employment

A blend of electronic system design with computing continue to be among the most employable in the country

90% employment with average starting salaries of Rs. 7 lakhs

Established in the year 2004, the department offers B.Tech program in Electronics & Communication Engineering and M.Tech program in Embedded Systems. The department is a recognized Research Centre under Jawaharlal Nehru Technological University, Hyderabad and conducts Ph.D programs since 2019.

The B.Tech Program in Electronics and Communication Engineering has been accredited by National Board of Accreditation (NBA) successively four i.e. in 2013, 2016, and 2019 and 2022 the M.Tech program in Embedded Systems got accredited by National Board of Accreditation (NBA) successively twice i.e. in 2019 and 2022.



## We are connecting the world

#### YOU WILL LEARN

**Digital design solutions:** Discover how Electronic Design Automation (EDA) software tools can address issues with architecture design, user research and concept development.

**Micro electronics:** Create prototypes and customdesigned microchips for consumer products, industrial controls and medical electronic equipment.

**Digital control and signal processing:** Explore the digital signal processing (DSP) and linear controls systems used to analyse and design physical systems

**Designing corporate networks:** Learn how to design and develop large corporate networks. Understand the last-mile wireless segment, network capacity planning and how to secure networks using innovative firewalls and ICT policies.

**Engineering Environment and Sustainability Practices:** Gain an understanding of engineering industry sustainability practices and build attributes required to make a successful transition from institute to the world of work.

#### **SKILLS YOU GAIN**

- $\rightarrow$  Cadence Analog and Digital Circuit Design
- → Xilinx HDL Programming
- → MATLAB Training on Image and Signal Processing
- $\rightarrow\,$  NI LabVIEW Training and Certification (CLAD, CLD and CLA)
- → KEIL Embedded System Programming
- → Cortex ARM Training using Embedded System Programming
- $\rightarrow$  PCB Design using Proteus
- → Digilent Training on Electronic Circuit Simulation using Analog Discovery Kits







# Electrical and Electronics Engineering

Electrical engineers use theories and tools from mathematics and physics to develop systems ranging from smart electric grids, design and application of renewable energy sources to internet-based information technology. The subject area encompasses an interesting range of topics and develops a variety of skills that are in great demand by employers such as, - How can sustainable energy be generated more efficiently?, What can be done to make machines and devices smarter and more user-friendly?, How can new technologies like the electric car and the e-step be further developed?, Electrical engineers work on these kinds of challenges every day. Are you up for the challenge?

# Because dreams need doing...

Access to high-end facilities including PSCAD software - MATLAB, NI LabVIEW; a wide range of development systems for microcontroller, Embedded systems, applications of IoT, Sensor Modeling and industrial automation tools for better understand how the theory they have learnt links to real scenarios.

# Challenges in clean energy

Design, development, simulation, prototyping, and testing to maximize the efficient use of energy whilst reducing reliance on fossil fuels in electrical systems

# Employment

A blend of electrical system design with computing continues to be among the most employable in the country.

Established in the year 2004, the department offers B.Tech program in Electrical & Electronics Engineering and M.Tech program in Electrical Power Systems.

The B.Tech Program in Electrical and Electronics Engineering has been accredited by National Board of Accreditation (NBA) successively four times i.e. in 2013, 2016, 2019 and 2022.



## We are lighting the world

#### YOU WILL LEARN

**Electronic and electrical systems:** Gain an understanding how electronic and electrical systems work by learning about circuit theory, measurement systems, DC/AC circuit applications and more.

**Sustainability and renewable energy design:** Discover how engineering and design can be used to help address issues related to climate change. You will undertake a renewable energy project which integrates specialist activities in Mechanical, Civil and Electrical Engineering.

**Systems modelling :** Get an introduction to the software tools used to model and investigate engineering systems, such as MATLAB and Simulink.

**Microcontrollers and digital design:** Develop hands on experience in designing circuits and code with microcontrollers through interactive Escape Room Based Learning.

**Machine sensing and intelligence:** Use cutting edge hardware and software along with practical real-world problems to equip you with skills related to smart machines and machine vision.

#### **SKILLS YOU GAIN**

- → High Voltage Engineering Training and Consultancy Work
- → Transmission Line SMU Training and Testing with Real Time Parameters and Consultancy Work
- → Feeder Protection SMU Training, Testing and Consultancy Work
- → Generator Protection SMU Training with Real Time Parameters and Consultancy Work
- → Sphere gap / Rod gap Study the Dielectric Strength and Consultancy Work
- → PSCAD Hands-on Tool for Analyzing Power System Transients
- → Delta Industrial Automation Controllers PLC, HMI, VFD and Servo Drive



# Mechanical Engineering

Mechanical engineering is a discipline of engineering that applies the principles of engineering, physics and materials science for analysis, design, manufacturing, and maintenance of mechanical systems. It is the branch of engineering that involves the production and usage of heat and mechanical power for the design, production, and operation of machines and tools.

# SAE India SUPRA

Working with the formula racing car champions

# Partnership

Benefit from our excellent, long-established links with major engineering firms in the local area. Gain real-world experience by working on industrially relevant projects.

# Employment

A huge range of potential employment within areas that include manufacturing, aerospace, automotive and marine engineering.

A blend of mechanical engineering with knowledge in computing continue to be among the most employable in the country Established in the year 2004, the department offers B.Tech program in Mechanical Engineering and M.Tech program in CAD/CAM. The department is a recognized Research Centre under Jawaharlal Nehru Technological University, Hyderabad and conducts Ph.D programs since 2019.

The B.Tech Program in Mechanical Engineering has been accredited by National Board of Accreditation (NBA) successively thrice i.e. in 2013, 2016, and 2019.



No machine can do the work of one extraordinary man

#### YOU WILL LEARN

**Fluid -Thermal Engineering:** Principles of engineering thermodynamics and fluid dynamics, and engineering applications in Industrial like automobiles, steam engines, and power plants

**Machine design:** Principles of engineering mechanics and applications in machine dynamics for detailed design

**Manufacturing Technology:** Basic manufacturing theories and applications of metal cutting practices to get the quality products through processes.

CAD/CAM Technologies: Basic engineering computer aided design and analysis software (CAD) and applications of computer aided manufacturing on CNC machines

**Optimization and Industrial management :** Operation research techniques and enterprise resource planning techniques in an industrial scenario.

**Digital manufacturing:** Fundamentals of industrial automation and application of mechatronic technologies.

#### **SKILLS YOU GAIN**

- $\rightarrow$  CAD Software Training using CNC Programming
- → Finite Element Analysis IS Code and Standard Interpretation
- → Machine Tool Training Industrial Drawing Practice
- → Field Instrumentations using Material Testing
- → Design of Heat Exchangers- Heat Load Calculation for Thermal Utilities







# Civil Engineering

Civil Engineers build the world's infrastructure, which encompasses Railways, Highways, Bridges, Waterworks, Skyscrapers, Canals, Wharves, Industrial Buildings, Rapid Transit Systems, Power Plants etc. They deal with the design, construction, maintenance, and repair of structures. There are galore opportunities for civil engineers, with new players entering the market and more large-scale developments announced around the globe. Civil Engineers play a very important role in improving the living standards of a society in the form of Structural Engineers, Transportation Engineers, Water Resources, and Environmental Engineers, Hydrologists, Geologists and Geotechnical Experts.

# Construction site visits

We're one of only a few institutes in the city who offer a program of weekly visits to construction sites to major civil engineering units and construction projects in Hyderabad

# Industry standard facilities

Superb computer facilities and the very latest design and planning software Invoke learning by doing

# Employment

Civil students are broadly employed by consultancies in private and public sector.

Civil engineers with knowledge in computing continues to be among the most employable in the country.

Established in the year 2008, the department offers B.Tech program in Civil Engineering and M.Tech program in Structural Engineering.

The B.Tech Program in Civil Engineering has been accredited by the National Board of Accreditation (NBA) successively twice i.e. in 2016 and 2019.



Building the future, on a foundation of excellence

#### YOU WILL LEARN

**Sustainable infrastructure:** Gain a grounding in the design and production of renewable energy systems.

**Civil construction/structures:** Understand civil engineering from a design, practical and project management perspective.

**Water resources:** Water engineering is an essential component of civil engineering. Learn about fluid dynamics, hydraulic systems, hydrological cycles, water quality, water management and water treatment.

**Transport engineering:** Analyse and design multimodal transport facilities, road and pavement structures.

**Surveying:** Take measurements of the earth's surface and perform calculations to produce maps and drawings for civil engineering design and construction.

**Computer aided design:** Use computers and software to design, improve and assess civil engineering projects.

#### **SKILLS YOU GAIN**

- → STAAD.Pro Structural Analysis & Design
- $\rightarrow$  AutoCAD 3D Drafting and Design of Buildings
- → RIVET Architecture Planning & Tracking of Building Life Cycles
- → Total Station Training in Modern Surveying and Building Construction
- → ETABS Training on Structural Software for Building Analysis and Design
- → WaterGEMS Training on Water Distribution Analysis and Design
- → EPANET training on Water distribution system modeling
- → AutoCAD MAP 3D training on GIS and Mapping Software ermal Utilities







# Master of Business Administration

Master of Business Administration is a graduate degree that provides theoretical and practical training for business or investment management. It is integrated with the holistic view of business across areas like marketing, finance, and accounting, all while developing those vital soft skills and leadership skills.

Established in the year 2006, the department offers four most coveted specializations like Financial Management, Human Resource Management, Marketing Management and Systems Management with an intake of 60.

A two year MBA program, accredited by National Board of Accreditation (NBA) successively twice that is in 2019 and 2022 for best educational practices for management.

## YOU WILL LEARN

- → Strategic problem-solving: helps in guiding on how to resolve a business problem or industry challenge.
- → Team Building: Teamwork with people from diverse backgrounds
- → Networking: exchanges of information and ideas among people with a common profession or special interest, in an Professional setting.
- → Business and management skills: oversees the operations of many different departments in a company



# Sciences and Humanities

Sciences and Humanities department provides the launching pad for the academic affluence and fundamental skill development of Engineering students. The department lays a strong foundation in Mathematics, Chemistry, Physics, and English

### Mathematics

Engineering mathematics is the art of applying maths to complex real-world problems, combining theoretical, practical engineering and scientific computing.

Engineering Mathematics graduates are superbly employable in transforming student analytical and problem solving skills.

## Chemistry

Engineering Chemistry is an imperative part of every degree program structured in a manner that its different theoretical concepts are studied along with their practical applications. This specialized branch of Engineering mainly deals with the study of matter in any form along with its chemical and physical properties, composition and applications.

## Physics

Engineering Physics clubs together with the fields of Engineering as well as applied sciences in gaining collective knowledge of the new concepts. Engineering Physics course allows students to pursue a wide range of topics while providing several different options for a career.

## English

Engineering English acts as a tool for global communication and also important for training students to attain communicatively competence. B.Tech Engineering English Syllabus for both semesters is designed to improve the linguistic and communicative competence of the students of Engineering.







# High-Quality Academic and Educational Administration

## Transformation Education

In our classrooms, students-centered learning and student led learning communities are highly encouraged. We are committed in developing students' autonomy and meeting the needs of diverse students. To generate students' motivation, enrich their flexibility, and prepare them for their future and competitiveness, faculty in IARE have been applying innovative teaching methodologies and compiling study materials that enable students to learn at their own pace.

## Easy Life at IARE - Premium and Pleasant

IARE provides low-price but high-quality student accommodation. The priority of housing is determined by the distance between the applicant's registered household and IARE. Any eligible applicants are allocated in a furnished 3/4-person room. Life is easy at IARE. Our catering teams provide a range of options including cafeterias, cafés, outlets and etc.

## Financial Assistance Programs- Keep a Quality Education within Reach of All Interested and Qualified Students

The tuition that we charge per annum, which is one of the lowest among top engineering colleges of Telangana. To keep a quality education within the reach of all interested and qualified students, IARE offers a variety of financial assistance programs including numerous merit and talent scholarships, fellowships, need-based grants, student employment, etc.

## General Education - Learn to Read Critically and Think Broadly

IARE's is Career Development Centre, Innovation Centre, Competence Building Centre, Research Centre, committed to molding well-rounded individuals who are ready to take challenges presented to them with open minds, considerate thoughts and unheralded passion. To create critical, creative thinkers that transform into citizens equipped to contribute to society in various ways, we intentionally shift our instruction to a studentcentered or learner-centered model, apply problembased learning methodology, programming and provide interdisciplinary research covering topics within humanities as well as social, natural and engineering.

# Clubs and organizations-To explore beyond the limits

To explore beyond the limits with learning moving beyond time and space, IARE offers a host of clubs and societies to inspire students to meet new people, to explore some team building activities, and to devote themselves to service and acceptance of others. Students at IARE have almost 25 clubs to choose from. Our clubs and organizations can be categorized into sports, outdoor, music and performance, general interests, welfare, volunteering, academic and students' council. Joining a club or organizations here is a perfect way for students to gain useful career skills and experiences as well as get to know a diverse range of people.

# Clean, Green and Sustainable

A Clean Campus Green Campus (CCGC) is an initiative taken by the institute to strengthen our philosophy "We believe in creating sensitive and socially conscious engineers who can contribute in shaping our built environment".

A Clean & a Green Campus is a place where environmental friendly practices and education combine to promote sustainability in the campus. It provides opportunities for students to study campus and local environmental problems, conduct environmental audits of its practices, reduce campus waste, maximize energy efficiency, and deal with land-use, transportation, and building planning.

This initiative has given us the opportunity to take the lead in redefining the environmental culture and develop new paradigms by creating sustainable solutions towards environment. realization of social responsibility towards nature and hence contributing a bit from everyone (students, faculty members and admin staff) in achieving this goal.

Sustainable Development Goals (SDG)

### **Objectives:**

The objective of CCGC is aimed to implement the approach and attitude towards sustainable living by creating a healthy atmosphere in and around the campus by creating sense of security, ease of accessibility and sensitizing students about their responsibility towards environment. Increasing biodiversity around the campus, Landscape restoration, storm water management and waste management are also part of this initiative. This will create an awareness amongst the students so they can then think about their surroundings and initiate new ways of environmental consciousness.

There are four heads under this initiative

- $\rightarrow$  Overall campus planning and design
- $\rightarrow$  Waste management strategy
- → Rain water harvesting
- $\rightarrow$  Use of Bicycles / Battery powered vehicles
- → Biodiversity
- $\rightarrow$  Design Interventions.



## Institutional Practices in SDG's:

Institute involves in a holistic approach that encompasses Good Health and Wellbeing (SDG 3), Quality Education (SDG 4), Gender Equality (SDG 5), Clean Water and Sanitization (SDG 6), Affordable and Clean Energy (SDG 7), Decent work and Economic Growth (SDG 8), Industry, Innovation and Infrastructure (SDG 9), Reduced Inequalities (SDG 10), Life on Land (SDG 15) and Partnerships for the Goals (SDG 17) reflecting the commitment to create a more sustainable and equitable world.

# Student Council and Clubs

Student Council is the governing body for student organizations and cultural activities, integrating students in event planning, logistics, and accounting

- Allows to gain hands on experience with end to end administration,
- Dynamic problem solving, and typical issue analysis
- Team work while having fun with friends at college
- Bagging memories of lifetime.

Extra-curricular activities allow students to explore new areas of interest. IARE is successfully balancing the time commitments involved in participating in clubs along with maintaining good grades in academics.



## **Cultural Clubs:**

- Club of Fine Arts
- Club of Plugs (Dance)
- Club of Raphsody (Music)
- Club of Photography and Film
- Club of N2O Factory (Comedy)
- Club of Bakasura (Foodies)

### Community Service Clubs:

- Club of National Service Scheme [ NSS ]
- Club of Street Cause
- Club of Well wishers
- Club of Women Empowerment

## **Technical Clubs**

- Club of E-Designing and Marketing (E-DAM)
- Club of Entrepreneurship
- Club of Citadel (Literary)
- Club of Compendium

## **Sports Clubs:**

- Club of Cricket
- Club of Volley Ball
- Throw Ball
- Basket Ball
- Kabaddi
- Foot Ball
- Badminton
- Carroms
- Table Tennis
- Chess

## **Objectives**

- $\rightarrow$  Initiates regular conversations, and events regarding all cultural aspects.
- → Nurtures the talent, celebrate the diversity and give expressions to the creativity of young minds.
- → Encourages the students to participate in various inter and intra college dance competitions.
- → Identifies budding artists and provide a foundation by recognizing and promoting their talent.
- → Encourages development of the creative, intuitive, and intellectual capabilities of students in music.
- → Offers a chance for students to contribute to the society, learning to have a positive attitude towards the life.
- → Provides opportunities for all students in the college to learn more about the values and knowledge based on the social work and its commitment to alleviate oppression in all of its forms.

# Sports and Recreation

The institute maintains a full fledged sports activity centre throughout the year and provides facilities for outdoor and indoor games. The institute has a well maintained separate unoccupied open area of 14 acres for the playfields. The infrastructure has been designed with good facilities for sports as well as recreational activities.

The students have been regularly representing the college in State / National level Inter-Collegiate Sports Meet in almost 25 events – Athletics, Badminton, Basketball, Billiards, Carroms, Chess, Cricket, Football, Kabaddi, Lawn Tennis, Snookers, Table Tennis, Volley ball, and Throw ball conducted every year.

# Additionally, Indoor Gym facility in shipping container

- → Excellent coaching facilities allow them to hone their skills and IARE teams have won acclaim for their performance in the sports field.
- → CIYARAAH an Inter-Collegiate sports week is a regular feature evoking tremendous response from the engineering colleges under the JNT University.

#### National Service Scheme (NSS)

The college actively pursues the National Service Scheme (NSS) having 250 volunteers every year and conducts the National Foundation for Communal Harmony, Mega Blood Donation Camp, Harithaharam, 2K Run-Rally for Rivers, 5K Run- India Against Corruption, 2K Run-Against Child Labour, Cancer Awareness Programme.







# Accommodation

IARE has a home away from home with the best amenities provided to students to experience a comfortable lifestyle within the vicinity of 1 km of the campus. The institute provides separate hostels for boys and girls.

- → Spacious well-ventilated rooms accommodating two persons in each room
- → Separate hostels for boys and girls
- → Ragging-free environment
- $\rightarrow$  24X7 Wi-Fi facility
- → Round-the-clock security
- $\rightarrow$  RO purified water facility
- → Well-furnished dining room with a seating capacity of 350 students
- → Health care and regular visits by registered physicians
- $\rightarrow$  Healthy and hygienic food
- → On call doctor
- $\rightarrow$  Free transportation to and from the institute



# Fests and Events



- ★ CONCOCT National product expo
- ★ CONSORTIUM Inter college technical fest

★ METE Project expo

- ★ CIYARAAH Inter college sports meet
- ★ EVOKE An alumni meet
- ★ GRADUATION DAY Students completing degree requirements
- ★ ORIENTATION DAY First B. Tech induction programme
- ★ SAMSKRUTHI A traditional day
- \* SPANDANA Annual Day
- ★ THE CONFETTI NIGHT Musical Concert









# Cafeteria

Spacious canteen inside the campus with a capacity of 400 persons at a time with dining hall and kitchen offering delicious and nutritious food prepared in a hygienic environment to all the students and the faculty.



# Transport

Fleet of 31 luxury buses, provides transport facilities to the students and faculty ensuring hassle-free and safe transportation from all parts of Hyderabad and Secunderabad.



# Who to Contact

Students require continuous support for one's academic, physical as well as mental growth and wellbeing. Keeping this in mind, the institute offices function in a student-friendly manner and remain accessible and helpful. You can directly contact the right department or office for all your queries, shown opposite are their functions for you to find the right contact.

### **Dean of Academics**

Handles matters pertaining to academic regulations, programs of studies and academic calendar.

#### Dean of Internal Quality Assurance Centre (IQAC)

Supervises internal mechanism for planning, guiding and monitoring quality enhancement activities.

#### Dean of Planning, Monitoring & Continuing Education

Deals with various processes of education to enhance continuous qualitative improvement periodically.

# Dean of Outcome Based Teaching and Learning

Develops the meaningful assessment for student learning through outcome based education.

#### Dean of Research and Development (R&D)

Provides guidance and support to the institutions for activities related to research and development.

### Dean of Industry Institute Interface

Channels between the industry and the Institute by providing quality technical Education.

### Dean of Policies, Development and Internal Audit

Deals with the maintenance of internal academic and administrative audit.

#### Dean of Information and Communications Technology (ICT)

Broadens the ICT services by providing access to action the E-Learning Readiness Videos.

### Dean of Technology Innovation and Incubation Centre (TIIC)

Fosters commercialization of Science and Technology in the Institute creating an effective Interface with the Industry.

#### Dean of Science and Technology Startup Park (STSP)

Oversees new start-up and financial counseling support. (Seed Support, Innovation, Refinement & Commercialization Grant).

# Dean of Outreach, Inclusivity and Extension Activity

Collaborates with other organizations to carry out extended social service and outreach programs.

# Dean of Competency Building and Consultancy

Provide direction and support to enhance skills of students and staff to build succession plan and meet industry needs.

#### **Dean of Career Development**

Helps the students in placement and job opportunities guiding them in preparing resumes and learning interview techniques.

# Dean of Career Counseling and Guidance

Staffed with professionals, provides personalized counseling services to the students.

#### Dean of International Student Affairs

Oversees student's exposure internationally by promoting the international student exchange standards.

# Dean of Student Admissions and Services

Oversees student-led activities including libraries, clubs and societies & discipline.

#### Dean of e-Governance

Digitalizes every unit of academic record providing real time information processing and knowledge management.

# Dean of Content Development and publishing

Oversees the creation and dissemination of content, ensuring its quality, relevance, and alignment with the institution's goals.

# How to Reach Us

IARE enjoys geographical advantage as it is well connected by air, rail, and road transportation. The institute is situated at Dundigal, adjacent to Nehru Outer Ring Road (ORR) off Medak -Narsapur junction (exit – 5), making it accessible to several important centers in and around the city.

The institute is 20 kms away from Secunderabad Railway Station, 11 km from JNT University, Kukatpally, Hyderabad and is just a 40-minute drive from Rajiv Gandhi International Airport at Shamshabad.

## How to get to Institute of Aeronautical Engineering by Bus

Well connected by various bus-routes from all over the Hyderabad / Secunderabad. The details are as under:

- $\rightarrow$  Bus No '230D' It takes 60 min from Chilakalaguda / Secunderabad Bus Station. TSRTC runs a total of 26 daily trips from Chilakalaguda towards Air Force Academy route.
- $\rightarrow$  Bus No '230X' It takes 80 min from Central Bus Station (CBS). TSRTC runs a total of 5 daily trips from CBS towards Dundigal route.
- $\rightarrow$  Bus No '83J/230' It takes 120 min from Kachiguda Bus Station. TSRTC runs a total of 6 daily trips from Kachiguda Bus Station towards Dundigal route.

# Contact us

Dr. L V Narasimha Prasad Principal Mobile: 97036 18753 Email: principal@iare.ac.in

Dr. | Suresh Goud Dean of Student Admissions and Services Mobile: 9966239198 Email: j.sureshqoud@iare.ac.in

Mr. B Raju Associate Dean of Admissions Mobile: 88862 34502 Email: b.raju@iare.ac.in

# Directions

Reach Balanagar X Roads -Take the road towards Medak/Narsapur Travel 14 Kms to reach GandiMaisamma X Roads

Head 03 KMS towards Dundigal to reach the institute.







120 MIN 60 MIN From

From Central Bus Station

Kachiguda Bus Station

From Secunderabad **Bus Station** 

# Campus Map



Nehru Outer Ring Road (ORR)



Find out more: www.iare.ac.in

# Institute of Aeronautical Engineering (Autonomous)

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Enquiries: info@iare.ac.in



