IARE

Institute of
Aeronautical Engineering

IT

DEPARTMENT OF
INFORMATION TECHNOLOGY

EVERYONE ***SHOULD LEARN***
HOW TO ***CODE*** *IT TEACHES YOU*
HOW TO THINK

VISION AND MISSION

VISION

The Department envisions to become a Center of Excellence in Information Technology with a strong teaching and research environment that produces competent graduates and to inculcate traits to make them not only good professionals but also kind, committed and socially oriented human beings.

MISSION

To promote a teaching and learning process that includes latest advancements in information technology, that provides strong practical base for the graduates to make them excellent human capital for sustainable competitive edge and social relevance by inculcating the philosophy of continuous learning and innovation in the core areas.

PROGRAM EDUCATIONAL OBJECTIVES (PEO'S) (2017-18)

PEO – I

To prepare the graduates for a successful career to meet the diversified needs of industry, academia and research.

PEO – II

To equip graduates with a solid foundation in discrete mathematical and engineering fundamentals required to develop problem solving ability in complex engineering design.

PEO – III

To train students to comprehend, analyze, design and provide ability to create novel products and technologies that give solution-frameworks to real world problems.

PEO – IV

To inculcate in graduates the qualities of leadership in technology innovation and entrepreneurship with effective communication skills, teamwork, ethics and to create ability for life-long learning needed in a successful professional career.

PROGRAM OUTCOMES (PO'S) (2017-18)

PO – I	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems (Engineering Knowledge).
PO – II	Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences (Problem Analysis).
PO – III	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations (Design/Development of Solutions).
PO – IV	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions (Conduct Investigations of Complex Problems).
PO – V	Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations (Modern Tool Usage).
PO – VI	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice (The Engineer and Society).
PO – VII	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development (Environment and Sustainability).

PO–VIII	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice (Ethics).
PO – IX	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings (Individual and Team Work).
PO – X	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions (Communication).
PO – XI	Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO–XII	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change (Life-long learning).

PROGRAM SPECIFIC OUTCOMES (PSO'S) (2017-18)

PSO – I	Professional Skills: The ability to understand, analyze and develop computer programs in the areas related to algorithms, system software, multimedia, web design, big data analytics, and networking for efficient analysis and design of computer - based systems of varying complexity.
PSO – II	Software Engineering Practices: The ability to apply standard practices and strategies in software service management using open-ended programming environments with agility to deliver a quality service for business success.
PSO – III	Successful Career and Entrepreneurship: The ability to employ modern computer languages, environments, and platforms in creating innovative career paths to be an entrepreneur, and a zest for higher studies.

Department Profile

Information Technology is defined as the 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.

The department has grown to be a center for excellence, innovation and research with dedicated faculty, highly motivated students, state-of-the-art facilities and an innovative teaching-learning environment. Our students have consistently achieved excellent placements year after year and have demonstrated a high level of success at pursuing post graduate studies.

IARE provides an environment that encourages and values the participation of all faculty and students. The Department has experienced significant growth over the last few years. It has a strong team of 18 faculty members working in areas of Image Processing, Software Engineering, Data Mining, Machine Learning, Natural Language Processing and Neural Networks, Faculty members are encouraged for higher education at reputed institutes and to take up research work. To provide excellent teaching and learning environment, department always takes initiatives in conducting seminars & workshops for students and academicians in the emerging areas of Information technology and organizing different technical events, student technical training programs. Department invites industry experts to deliver guest lecturer and seminar sessions related to syllabus to enable the students to get industry exposure.

The Students are encouraged to participate in co-curricular and extracurricular activities which are necessary for personality development in all aspects. Additional training programs are given to the students to make students employment ready and keep them updated with latest technology. Our students made us proud by winning prizes at different National Level Technical Symposiums conducted at various other Institutes.

Department History

The department of **Information Technology** was established in 2001 with an annual intake of 60 and has grown immensely today to offer 4 Year B.Tech with annual student intake of 120 besides an additional 20% under lateral entry scheme.

The Information Technology B. Tech program got accredited thrice by the National Board of Accreditation (NBA), New Delhi. It first got accredited in the year 2008 for three years, then in 2013 for two years and again in 2016 for three years.

HOD's Profile

Dr. K SRINIVASA REDDY received the Ph. D degree in Computer Science and Engineering from Jawaharlal Nehru Technological University, Ananthapuramu (JNTUA), Anantapur in 2016, M.Tech degree in Computer Science and Engineering from the SRM Institute of Science and Technology, Chennai with distinction in 2005 and Bachelors of Technology in Computer Science and Engineering from Jawaharlal Nehru Technological University (JNTU), Hyderabad with distinction in the year 2003. He is currently working as Professor and Head, in Information Technology Department, Institute of Aeronautical Engineering (IARE) Dundigal, Hyderabad, Telangana, India, where he is involved in research and teaching UG and PG students, and his major areas of research are Image Processing, Machine Learning and Data Analytics.

Program Structure

Our curriculum lays intensive focus on:

Computer Programming, Data Structures, Design and Analysis of Algorithms, Database Management Systems, Computer Organisation and Architecture, Object Oriented Programming, Microprocessor & Interfacing, Operating Systems, Computer Networks, Theory of Computation, Compiler Design, Software Engineering, Web Technologies, Object Oriented Analysis and Design, Optimization Techniques, Linux Internal, Data Warehousing & Data Mining, Cloud Computing, Software Testing Methodology, Information Security, Big Data and Business Analytics, and Machine Learning.

Laboratory Facilities

The department of Information Technology has 8 State-of-the-art computer labs, 240 latest Intel core i3/i5 computers running Linux/Windows Operating Systems and a server room containing Rack servers (blade server). The department is providing sufficient computing facility for the students offering excellent training in computer programming. All these computing resources are inter-connected with high speed intranet having 100 Mbps Internet connectivity to the outside world. The lab is adequately supported by peripherals like DMP, Printers, Scanners and more.

Case Tools and Software Testing Lab

Data mining and Web Technologies Lab

Database Management Systems Laboratory

Computer Networks Lab Through Linux

Unique @IT

The Department always upholds a research culture, in parallel with the overall teaching-learning process. The outcome is the papers published by the students and faculty in National and International conferences and journals. Some of the research areas of focus are:

- Big Data – Hadoop
- CISCO Academy
- Data Analytics Using R Programming
- Informatica
- Internet of Things (IoT) with Arduino
- SAP-ABAP

Big Data - Hadoop

BIG DATA - HADOOP helps to apply practical skills and analytical knowledge to real time issues. Big Data refers to a huge volume of data, which is a collection of large datasets that cannot be processed using traditional computing techniques. Hadoop is an open-source framework that allows to store and process big data in a distributed environment across clusters of computers using simple programming models. It is designed to scale up from single servers to thousands of machines, each offering local computation and storage.

This course aims to train the students in Big Data – Hadoop. The goal is to accelerate the technology Big Data – Hadoop is growing across the world and this strong growth pattern translates into great opportunity for all the IT Professionals. This course builds students to become passionate about building successful career in Big Data- Hadoop.

CISCO Academy

As Enterprises migrate toward controller based architectures, the role and skills required of a core network engineer are evolving and more vital than ever. To prepare for this network transition, the Cisco Certified Network Associate (CCNA) Routing and Switching certification will not only prepare students with the knowledge of foundational technologies, but ensure to stay relevant with skill sets needed for the adoption of next generation technologies.

The role and skills required of a core network engineer are evolving significantly as enterprise networks encounter increased business demands and technology advancements. To meet these challenges, skilled IT professionals are needed with up-to-date, networking skills. For individuals looking to build and validate CISCO networking fundamentals, the CISCO CCNA Routing and Switching program focuses on foundational IP networking skills required to deploy, operate and troubleshoot network layers 1-3. It introduces awareness of programmable networks i.e. Software Defined Networking (SDN), Virtual Private Network (VPN) technologies, adoption of IPv6, virtualized and cloud services, along with knowledge of Quality of Service (QoS) concepts and the ability to ensure critical traffic is being properly prioritized.

Data Analytics using R Programming

R is statistical programming used for data analytics and data visualization. With over 2 million users worldwide R is rapidly becoming the leading programming language in statistics and data science. Every year, the number of R users grows by 40% and an increasing number of organizations are using it in their day-to-day activities.

The knowledge on this course accelerates the students to use R programming to explore variety of data from a variety of sources by building data models and generating charts, graphs, and other data representations. As data intensive applications are emerging more, there is good demand for people having R language skills in the industries. With the knowledge gained in this course, student will be ready to undertake his first own data analysis.

Informatica

Informatica helps to apply practical skills and analytical knowledge to real time issues. The Extract, Transform, and Load (ETL) is a three-stage process in database usage and data warehousing. It enables integration and analysis of the data stored in different databases and heterogeneous formats. After it is collected from multiple sources (extraction), the data is reformatted and cleansed for operational needs (transformation). Finally, it is loaded into a target database, data warehouse or a data mart to be analyzed.

In most of the Data Integration or Data Warehousing projects, the amount of time spent in enforcing business data domain rules and/or business data integrity rules could be as high as 80 percent of the total time and enforcement of such rules normally happens through Data Transformations.

Internet of Things (IoT) with Arduino

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Scope of Employment

On the successful completion of the program, Job opportunities are available for IT Graduates in Government as well as Private sector. Graduates may look at the following profiles:

- SOFTWARE ENGINEER / PROGRAMMER
- DEVELOPER (.NET / JAVA / C++ etc...)
- NETWORK Administrator
- DATABASE ADMINISTRATOR
- NETWORK PROGRAMMER
- TESTER
- SYSTEM ANALYST
- BUSINESS ANALYST
- SYSTEM ENGINEER
- HARDWARE ENGINEER
- SUPPORT SPECIALIST

Companies Visited

SOME OF OUR RECRUITERS

Infosys
Tech Mahindra
Mphasis
NTT DATA
CYIENT
Aricent
TEK Systems
AMARA RAJA
Excers
vitech
biztime
BYJU'S CLASSES
EOS
APTROD technologies
WINDCARE INDIA PVT. LTD.
<devathon>
Glenwood Systems
mediamint
SAFRAN Engineering Services
ADP
NCR
intelenet
Rane
mroads
CDK Global
HCL
TATA ADVANCED SYSTEMS
Belcan
Zen Technologies
ibs
PurpleTalk
Mindtree
TATA TECHNOLOGIES
Shapoorji Pallonji
Xpanxion
EIDIKO
L&T Infotech
apps associates
ZENOPSYS

Activities
@ IT Department

Blood Donation Camp

METE Project Expo

Students Participation in CONSORTIUM

Industrial Visit

EMINENT PROFESSORS

Dr. K Srinivasa Reddy

Professor & Head

Dr. K. Srinivasa Reddy is a Professor and Head of the Department of Information Technology. He received B.Tech degree in Computer Science and Engineering (CSE) from JNT University, Hyderabad in 2003; M.Tech degree in CSE from SRM Engineering College, Chennai, Tamilnadu in 200 and Doctor of Philosophy (Ph D) in CSE from JNT University, Anantapur in 2016. He has a total of 13 years of experience in teaching and research. He has published several papers in various international and national reputed journals. He is a member of CSI, ISTE, IAENG professional societies. His major research interests are Image Processing, Pattern Recognition, and Machine Learning.

Dr. I Surya Prabha received her master's degree in Computer Applications from Osmania University in the year 2003. She received her Master's degree in Computer Science from JNT University, Hyderabad in the year 2013. She was awarded a doctorate on software Engineering at Technoglobal University, Shillong. She has published 10 papers in national and international journals. Her active attitude and tasteful mind made her the chief coordinator of cultural club at IARE. Dr. Prabha joined as a professor of IT in 2008.

Dr. P L Srinivasa Murthy is a Professor in Department of Computer Science & Engineering. He has 23 years of teaching experience. He has done B.E. in Instrumentation Technology from Gulbarga University, Gulbarga and M.Tech. in Computer Science And Engineering from Jawaharalal Nehru Technological university, Anantapuram. He received his Ph.D. in Information Security from Jawaharalal Nehru Technological university, Kakinada. He presented 02 papers in International conferences and published 5 papers in various International journals.

Faculty

Professors

Dr. I Surya Prabha MCA, Ph.D

Dr. P L Srinivasa Murthy M.Tech, Ph.D

Assistant Professors

Mr. A Praveen -M.Tech

Mr. B Venkateswara Rao - M.Tech, (Ph.D)

Mr. Ch Suresh Kumar Raju - M.Tech

Ms. P Ila Chandana Kumari - M.Tech

Ms. B Dhanalaxmi - M.Tech, (Ph.D)

Mr. A Krishna Chaitanya - M.Tech,(Ph.D)

Mr. E Sunil Reddy - M.Tech, (Ph.D)

Mr. N Bhaswanth -M.Tech

Ms. B Pravallika -M.Tech

Ms. G Chaitanya -M.Tech

Mr. T Vishnu Vardhan Reddy - M.Tech

Ms Y Harika Devi - M.Tech

Ms. P. Navya - M.Tech

Ms. A Swapna - M.Tech

Ms. K Aparna - M.Tech

Ms. B Rekha - M.Tech

Ms. A Lakshmi - M.Tech

Ms. P Laxmi Devi - M.Tech

Associations

1. The department has forged strong associations with leading organization of R & D activities.

2. A Number of co-curricular and extra-curricular activities organized under the Technical Association for Information Technology (TAIT) for the all-round development of students.

Industry and Academic Collaborations:

1. Microsoft Innovation Center
2. Oracle Academy
3. Infosys Campus Connect Programs
4. CISCO certification courses
   Association with NASSCOM

Contact

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Institute of Aeronautical Engineering

(Autonomous)

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