



i-M.Sc. (IT)

Integrated Master of Science
(Information Technology)
Five Year Integrated Programme

**Faculty of Computer Applications &
Information Technology**

Pioneer in Computer Science Education

GLS UNIVERSITY

GLS University is a statutory state private university established by an Act of Gujarat State Assembly. GLS University is set up with the vision to benchmark global standards of education and create path breaking programmes in the areas of strategic importance not only to the country but also across the world. The university has initiated various innovative programmes in diverse areas of Management, Information Technology, Communications, Social Sciences, Commerce. Besides the existing programmes of B.C.A., iMSc(IT), M.C.A, MSc(IT), B.B.A., M.B.A., B.Com., M.Com., etc. offered by the various institutes under the umbrella of GLS university. The university is geared up to introduce pioneering undergraduate and post graduate programmes in the various disciplines. With a view to provide impetus to research, the university intends to have research focus in its undergraduate and post graduate programmes. Moreover, exclusive research degrees like M.Phil. and Ph. D. have also been introduced in various disciplines.

GLS University, with its rich legacy of Gujarat Law Society, has become Gujarat's first globally relevant university, delivering quality education at affordable costs.

FACULTY OF COMPUTER APPLICATIONS & INFORMATION TECHNOLOGY (FCAIT)

FCAIT offers various technology oriented undergraduate and postgraduate courses with a unique fusion of technology, innovation and creativity. The institute provides conducive environment for students with different aptitudes and different educational experiences to benefit intellectually, academically and vocationally.

The institute aims at integrating various cutting-edge Open Source technologies that provide a wide scope for students to learn, engage & transform. The institute trains students to cater to the need of time and to be upgraded with the current trends and technologies and demonstrate intelligence, ingenuity, inventiveness and independence in all areas of endeavors.

The institute strives to impart quality education through Students' Engagement Tools such as blended learning, fruitful faculty-student interaction, engaging institute-industry interface, balanced mix of conceptual learning and practical demonstration, continuous evaluation, project-based learning and many more. The institute believes in providing an ambiance where a student can grow academically, emotionally and socially. The institute always aspires that its students must turn out as inquisitive minds, engaged citizens, dynamic professionals and well-rounded individuals.



FROM THE PRESIDENT'S DESK

Dear Prospective Student,

Greetings from GLS University!

At GLS University, we believe that it is not a crisis, but our response to it that defines us.

The COVID-19 global pandemic represents the most serious public health challenge that our country and the world have faced in a century. GLS University has been working tirelessly not only to help mitigate the effects of this crisis on the university community, but also to alleviate the suffering of the most vulnerable members of society.

Our constant concern from the beginning of the crisis has been the health, welfare and safety of the entire GLS University community. To this end we have taken a number of significant operational decisions.

Whilst we all are adapting to new norms of maintaining social distancing; GLS University is investing heavily into world-class ONLINE platforms and Learning Technologies that will ensure that the education delivery continues uninterrupted. This initiative would put our university at par with the leading global universities that have adopted to high-tech educational innovations enabling us in doing all academic tasks ONLINE such as:

- 1) Conduct and Record Online Virtual Video Lectures
- 2) Arranging Online Exams, Presentations, Quizzes and Assignments
- 3) Enabling Online Group or Collaborative work
- 4) Online Query resolution
- 5) Online Grading, Feedback and Announcement of Results

GLS University and on behalf of my staff members, we ensure a smooth educational journey during your programme tenure at GLS University.

As one of the most respected and long-standing institutions in Gujarat, GLS University has taken its responsibility very seriously. From donating Rs. 51 lakhs to the CM's Relief Fund, a comprehensive student benefit scheme/ scholarship for all deserving and needy students to reduce their financial hardship, special scholarship for COVID-19 affected students for the academic year 2020-21, GLS University is doing its bit in line with our motto of "Learn, Love, Serve".

While there is still a lot of uncertainty about the coming months, our plans for the next academic year are based on two principles that remain completely certain:



- 1) first and foremost, to protect the health of our students to the best extent possible
- 2) to provide all of our students with an excellent academic experience

I want to provide a strong assurance that we shall be doing everything possible to safeguard the health of our community through fulfillment of all norms & safeguards in a campus and to maintain our high standards of excellence in teaching and learning.

No matter what, we are committed to educating all of our students in the upcoming new academic year, in VIRTUAL classrooms, and beyond the classroom. We are committed to a safe and enriching educational experience. We are committed to you.

Sudhir Nanavati
President, GLS University



QUALITY BENCHMARKS OF FCAIT

**Credibility of
over 22 years**

**Constructive Pedagogical
Approaches**

**Customized Syllabus
Integrating Industry Trends**

**Contemporary
Infrastructure Resources**

**Classroom Learning Fabricated
with Concrete Lab Learning**

**Wi - Fi Equipped
Campus**

**Rich Collection of
Diversified Library Resources**

**Experimental Learning Through Lectures, Practical Lab Exercises,
Case Studies, Work Integrated Assignments and Activities**

APPREHENDING THE SUCCESS

500+

Students Participating in
Various Curricular &
Co-curricular Events

300+

Winners Shining @ Various
Events

200+

Students Representing
Institute @ Sports Events


INTEGRATED MSC (IT) PROGRAMME

Information Technology field has been catalyst in contributing to upgrading the way people live, work and communicate. iMSc(IT) is a five-year integrated course congregated around the Information Technology domain. The course is an explicit choice for aspirants with a passion to carve their career in the most promising and advancing field of technology.


The syllabus is intricately designed to provide an equal emphasis on theoretical and practical knowledge. The syllabus assembles contemporary subjects like Artificial Intelligence, Robotics, Big Data Analytics, Python, Machine Learning, Microprocessors & Assembly Language, Digital Logic & Circuits, Embedded Systems, Digital Image Processing, Emerging Technologies as well as traditional subjects as Multimedia Systems, Software Engineering, Java, Data Communications, C, C++, Networking, Web Designing and many more. The students are encouraged to undertake research through Dissertation and explore practical aspects of IT through Industrial Projects.

An iMSc(IT) graduate can climb the horizons of reputed and highly rewarding career as IT Consultant, Cloud Architect, Computer Forensic Investigator, Mobile Application Developer, Web Developer, Software Engineer, Network Administrator, Data Modeler, Business Analyst, Computer & Information Research Scientist and many more.





360° Development of Students in Education & Concurrent Domains



Enhancing the Scientific Aptitude of Students



Comprehensive Grounding in Technological Concepts

PROFESSIONAL ENRICHMENT



Nurturing Knowledge, Key Skills and Capacity for Learning



Building the Inquisitiveness for Learning & Innovations



Competency Building for Professional Enrichment

ELIGIBILITY CRITERIA

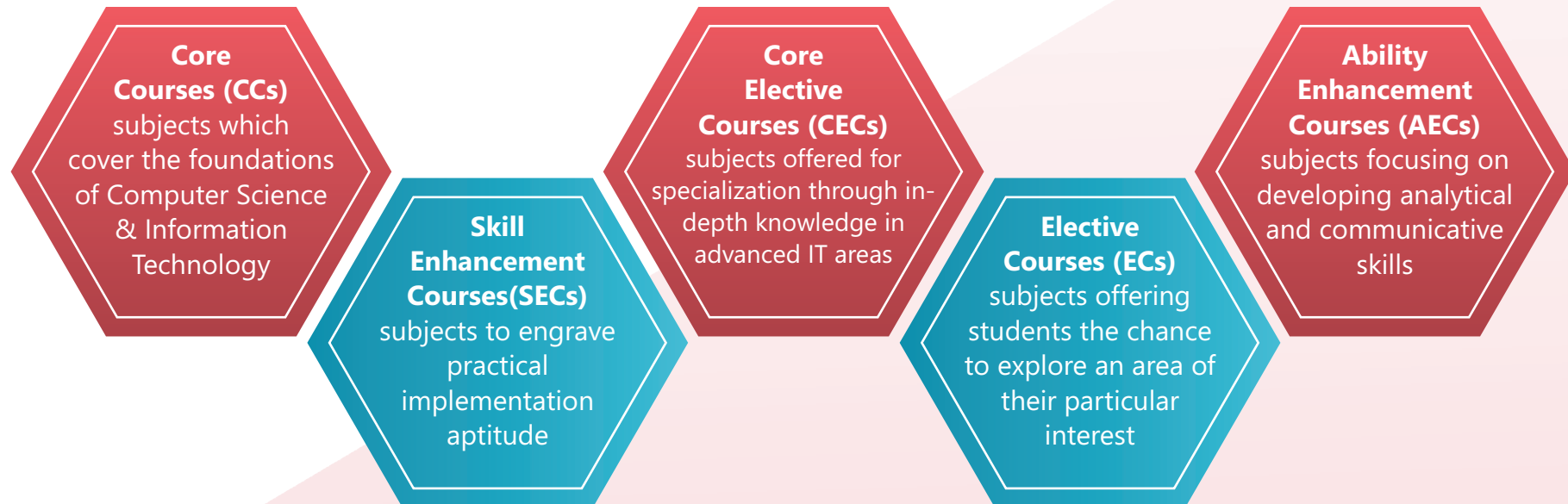
The applicant must have passed the Gujarat Higher Secondary Education Board(GHSEB)/ Central Board of Secondary Examination (CBSE) / Indian Council of Secondary Examination (ICSE) or its equivalent under the 10 + 2 pattern in General or Science stream during the current year with the following subjects:

- (1) English and
- (2) Any one of the following subjects:
 - Mathematics
 - Statistics
 - Accounting and Book Keeping
 - Physics
 - Business Mathematics
 - Accountancy
 - Computer

The candidate must have obtained the following minimum percentage of aggregate marks (i.e., total marks obtained divided by the maximum total marks admissible, including marks of all subjects , theory and practical):

- For Open category candidates: 45%
- For Reserved category candidates: 40%

THE CURRICULUM



COURSE STRUCTURE

SEMESTER I

Core Courses

- Introduction to Information Technology
- Problem Solving Through Programming
- Mathematics for Computer Science – I
- Web Designing using HTML5

Skill Enhancement Courses

- Practicals on C
- Practicals on Web Designing using HTML5
- Publishing & Multimedia Tools

Ability Enhancement Course

Elective Course

SEMESTER II

Core Courses

- Fundamentals of Computer Organization
- Advance C
- Mathematics for Computer Science – II
- Database Systems – I

Skill Enhancement Courses

- Practicals on Advance C
- Practicals on Database Systems – I
- Practicals on DHTML

Ability Enhancement Course

Elective Course

SEMESTER III

Core Courses

- Introduction to Object Oriented Programming
- Fundamentals of Operating System
- Introduction to XML
- Data Structures

Skill Enhancement Courses

- Practicals on Object Oriented Programming
- Practicals on XML
- Practicals on Data Structures

Ability Enhancement Course

Elective Course

SEMESTER IV

Core Courses

- Advanced Object Oriented Programming
- Core Java
- Microprocessor & Assembly Language
- Statistical Computing

Skill Enhancement Courses

- Practicals on Advanced Object Oriented Programming
- Practicals on Core Java
- Practicals on Operating System

Ability Enhancement Course

Elective Course

SEMESTER V

Core Courses

- Introduction to Data Communication
- System Analysis & Design
- Multimedia Systems
- Programming With PHP

Skill Enhancement Courses

- Practicals on Multimedia
- Practicals on PHP
- Database Systems – II

Ability Enhancement Course

Core Elective Course

SEMESTER VI

Core Courses

- Introduction to Python
- Artificial Intelligence
- Software Engineering
- Information Security

Skill Enhancement Courses

- Practicals on Python
- Dissertation / Mini Project

Ability Enhancement Course

Core Elective Course

SEMESTER VII

- Enterprise Computing with Cloud
- Design and Analysis of Algorithms
- Distributed Operating System
- Data Warehousing and Data Mining
- Cryptography and Network Security
- Web Programming using Python
- Web Programming using Java

SEMESTER VIII

- Web Services
- Advanced Networking
- High Performance Computing using Python
- Data Science
- Network Programming
- Machine Learning with Python
- Elective I
 - App Development using Android
 - App Development using iOS
 - App Development using Angular
- Summer Assignment

SEMESTER IX

- Fundamentals of Blockchain
- AI and Robotics
- Wireless Sensor Networks
- Big Data Analytics
- Linux Internals
- Programming of Linux Internals
- Programming with NoSQL

LIST OF ABILITY ENHANCEMENT COURSES

- Design Thinking
- Introduction to Electronics, Digital Logic & Circuits
- Foreign Language – I
- Embedded Systems – I
- Embedded Systems – II
- Website Frameworks – I
- Website Frameworks – II
- Numerical Methods
- Communication Skills

LIST OF ELECTIVE COURSES

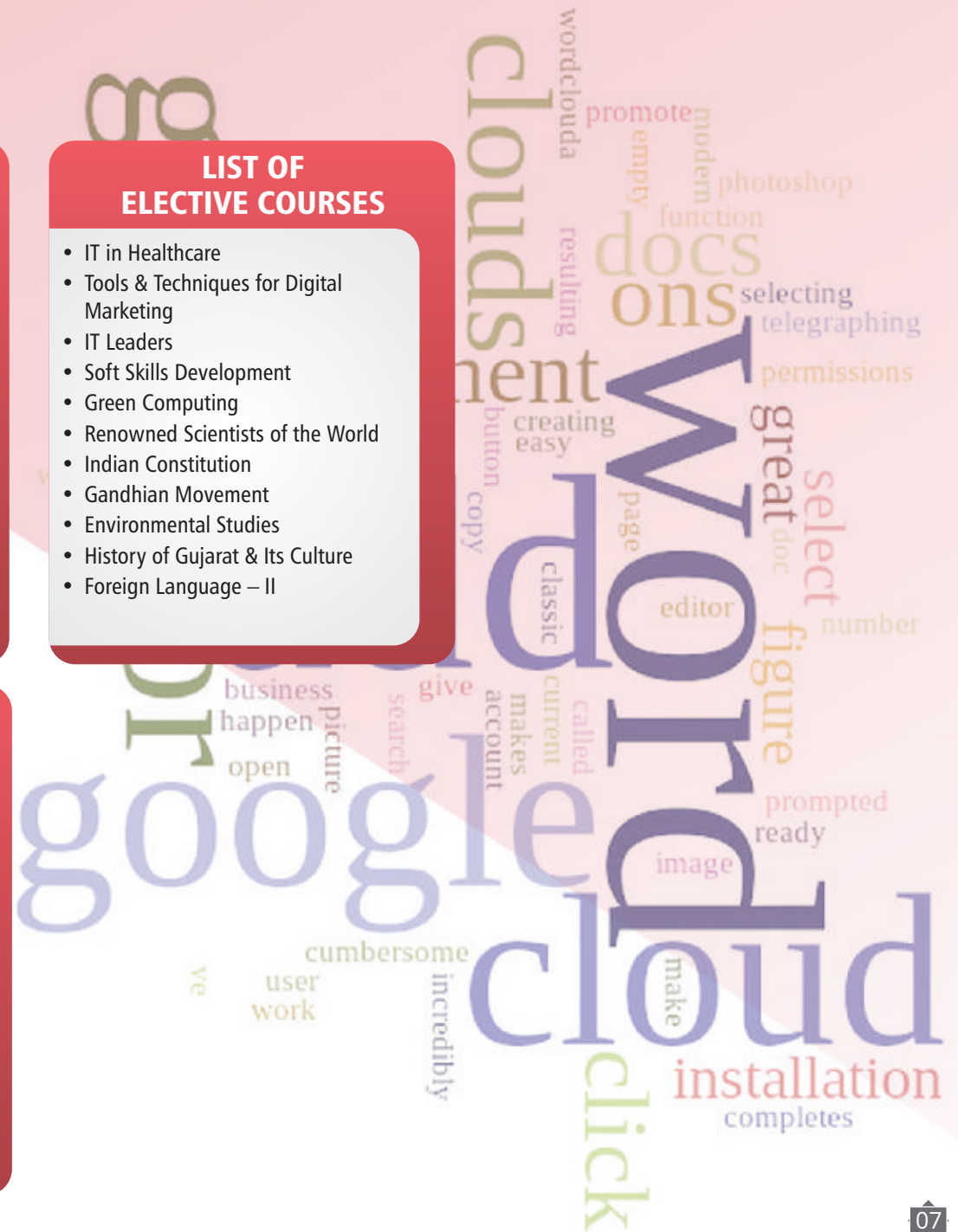
- IT in Healthcare
- Tools & Techniques for Digital Marketing
- IT Leaders
- Soft Skills Development
- Green Computing
- Renowned Scientists of the World
- Indian Constitution
- Gandhian Movement
- Environmental Studies
- History of Gujarat & Its Culture
- Foreign Language – II

SEMESTER X

- Opportunities in Emerging Technologies
- Industry Internship

LIST OF CORE ELECTIVE COURSES

- Machine Learning
- Parallel Processing
- Computer Graphics
- Operations Research
- Digital Image Processing
- System Software



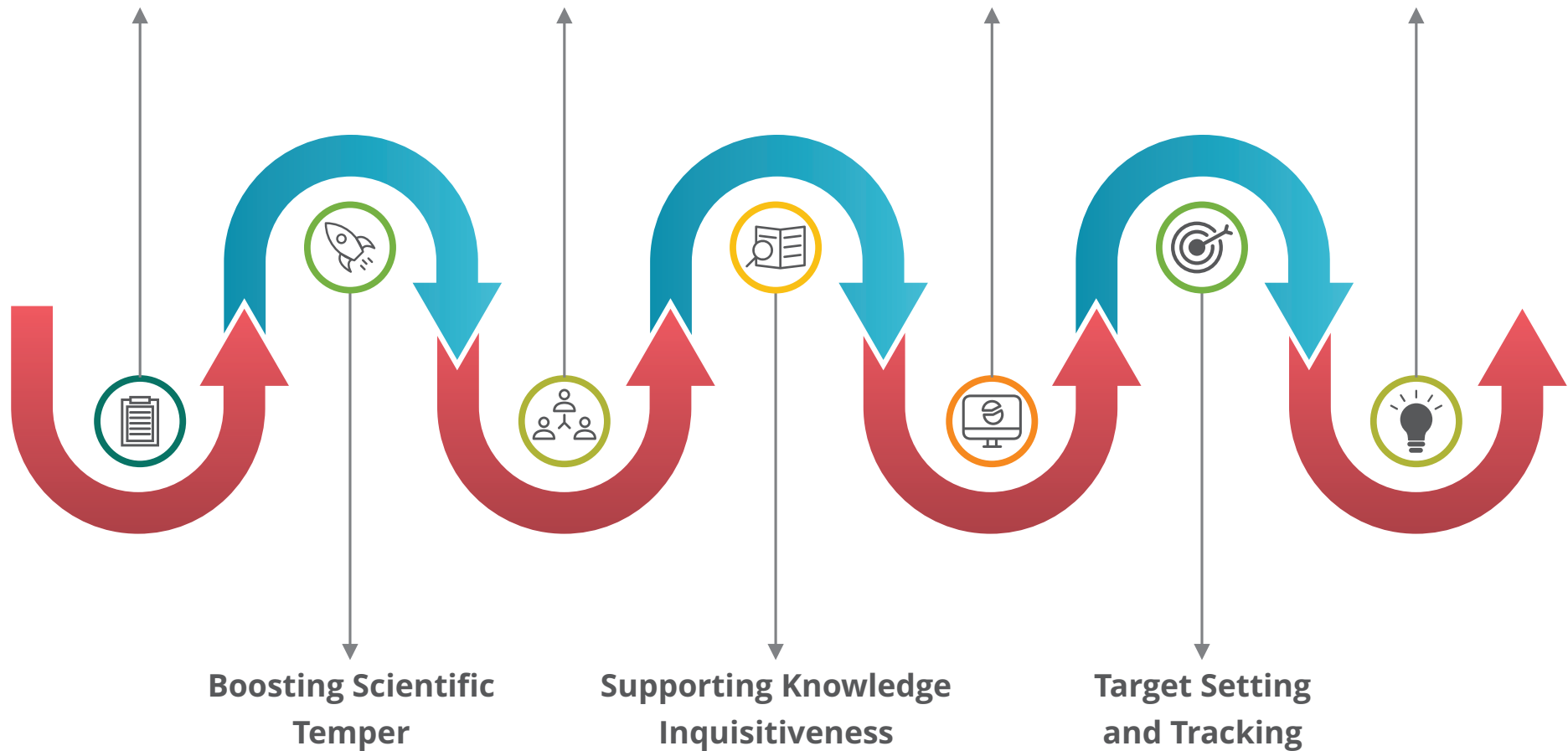
PEDAGOGICAL FOUNDATIONS

Industry Focused Curriculum

Intensified Practical Oriented Learning

Critical Collaborative Learning

Fostering Intellectual Curiosity



HACKATHON

“Student Startup Innovation Policy (SSIP)” is pioneering series of interventions initiated by the Government of India. Gujarat Hackathon is an annual flagship program where young students can leverage their technical skills to solve real life challenges posed by various stakeholders. The institute motivates the budding talents on national platforms through government initiatives.



**TEAMS WITH
1ST RANK**



**TEAMS
&
MENTORS**



PARTICIPANTS



**PROBLEM
STATEMENTS**



HARDWARE EXPLORATION & EXPERIMENTATION

Numerous Smart Devices are now integrated in human living in recent times. These IoT devices can connect to the Internet and other devices making feasible to operate and implement innovative functioning in our traditional devices. The exploration of microcontroller units and single board computers as Arduino, Raspberry Pi and others enable students to get an insight of role and functioning of the Smart Devices.



CAREER DIMENSIONS

The Placement Cell is in continuous effort to provide students with best placement opportunities. It works towards preparing the students to become eligible for jobs in most efficient and reputed companies and at most appropriate job designations. It actively organises various placement support activities as mentoring and preparing students for facing interviews, building an effective resume, pre – placement talks, placement registrations and guidance.

MASS COMPANY
DESIGN
STRATEGY PRICE
PRODUCT
MEDIA MANAGER
TEAM
VIRAL PLACE MARKETING
SERVICE
SUCCESS

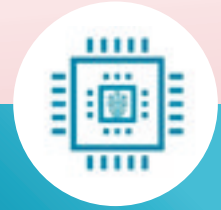
TOWARDS ACADEMIC EXCELLENCE



Software
Experimenta-
tion
Projects



Knowledge
Enhancement
Presentations



Embedded
Systems
Exploration



Digital
Learning
Resources



Supportive
Learning
Environment



Student
Mentorship &
Guidance



Preparatory
Bridge
Courses

GLOBAL COLLABORATIONS



SCHOLASTIC ACTIVITIES



TECH TALKS

Futuristic Technology
Oriented TEDs



CYBERSHADEZ

National Level Technical
Event to Showcase
Students' Talents



EXPERT LECTURE SERIES

Insights of Experts on Latest
Technological Advancements



INDUSTRIAL VISITS

Exploring Role of
Technology in various
Industrial Processes



EDUCATIONAL TOURS

Exploring Knowledge
Beyond Textbooks



SEMINARS & WORKSHOPS

Grounding Technological
Concepts through Hands-
on Training & Lectures



LIVE PROJECTS

Develop Technological &
Intellectual Abilities,
Communication Skills & Team
Working Capabilities



CODE EXPRESS

Coders Competing to Solve
Real Life Practical
Challenges

EXTRA CURRICULAR ACTIVITIES



YOUTH FESTIVAL

Showcasing Multifaceted Talents



SHADEZ

Extravaganza of Events & Performances



GUEST LECTURES

Counselling Students for Career Guidance & Selection



ISR / NSS

Awareness About Social Assets & Responsibility



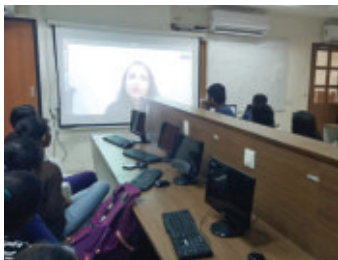
CWDC

Empowering Women Encompassing Security



SPORTS

Towards An All-Round Development



VIDEO INTERACTION

Face To Face With the Who's Who Around the World



DKOSMOS

Magazine to Showcase Literary Talents



Contact Details

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