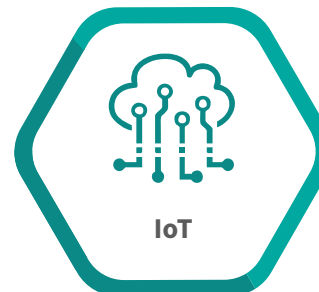
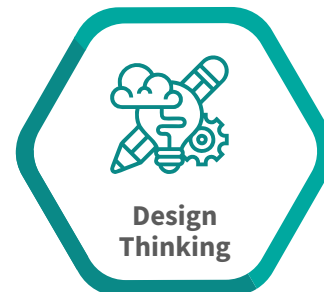
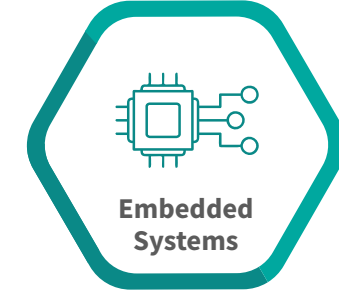
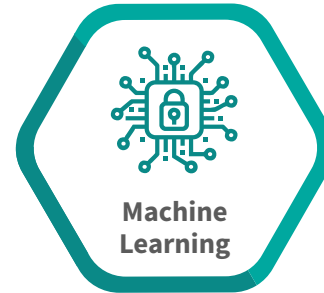
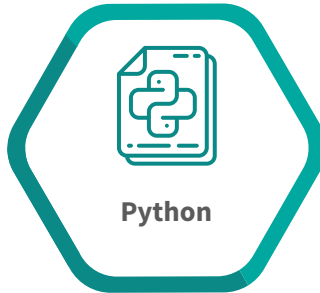
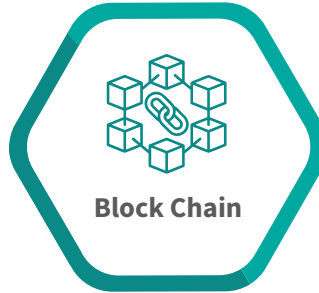
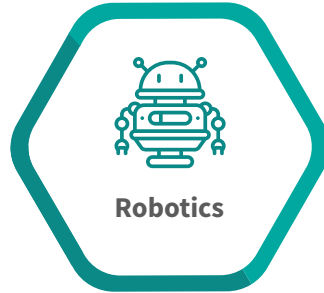


# Faculty of Computer Applications & Information Technology

Pioneer in Computer Science Education



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

**Integrated MSc (IT)**

An Exclusive IT Programme for Commerce & Science Students





# 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 to 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, and Commerce. Several programmes such as B.C.A., iMSc (IT), M.C.A, MSc (IT), B.B.A., M.B.A., B.Com., M.Com., etc. are offered by the various institutes under the umbrella of GLS university. The university is geared up to introduce other pioneering undergraduate and postgraduate programmes in the various disciplines. With a view to provide impetus to research, the university intends to have research focus in its undergraduate and postgraduate programmes. Moreover, exclusive research degrees like Ph. D. have also been introduced in various disciplines.

## FACULTY OF COMPUTER APPLICATIONS & INFORMATION TECHNOLOGY (FCAIT)

FCAIT offers various technology oriented undergraduate and postgraduate courses with a distinctive fusion of technology, innovation and creativity. The institute nurtures students in a conducive environment to enhance their intellectual, academic and vocational skills.

FCAIT offers various contemporary subjects encompassing the Cutting-edge Open Source technologies so that students have opportunities to learn, to engage and to transform. The institute trains students to hold up with the current trends and technologies and motivates to demonstrate intelligence, ingenuity, inventiveness and independence in all areas of endeavours.

The institute believes in providing an ambiance where a student can grow academically, emotionally and socially. The institute always inspires its students to develop inquisitive minds, become engaged citizens, turn out to be 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. At the outset, I would like to take this opportunity to thank all the doctors, nurses, technicians, pharmacists, sanitation workers, emergency services workers, teachers, and everyone who is rising to the occasion and caring for our society at large. Your dedication, commitment, and courage deserve our deepest gratitude and admiration. Your service to our society is touching countless lives and making thousands of differences.

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. Apart from taking the precautionary steps to curb the spread of the virus, we have successfully completed our vaccination drive and more than 500 staff members of GLS University have been duly vaccinated. As even the darkest night ends with the crack of dawn, we are hopeful that the measures taken will lead us through these difficult times and take us forward to a better future.

To this end, we have also 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 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 contributing 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, 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 the fulfillment of all norms & safeguards at our 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

# INTEGRATED MSC(IT) PROGRAMME

In current realms, when the world became stagnant, IT field revived the measures to address the acute consequences of pandemic. The field of Information Technology has been catalyst in contributing to upgrading the way people live, work and communicate.

iMSc (IT) is a five year integrated course framed for the Information Technology domain. The course opens up career horizons for students from both Commerce as well as Science background and with a passion to carve their career in the most promising and advancing field of Information Technology. The course empowers students to become industry ready with an approach to holistic development in academic, professional as well as cognitive domains.

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 Modeller, Business Analyst, Computer & Information Research Scientist and many more.

## STRIKING FEATURES



**Constructive  
Pedagogical  
Approaches**



**Customized Syllabus  
Integrating  
Industry Trends**



**Contemporary  
Infrastructure  
Resources**



**Experimental  
Learning  
Through Lectures  
Practical Lab,  
Case Studies &  
Assignments**



**Classroom Learning  
Fabricated with  
Concrete Lab  
Learning**



**Wi - Fi Equipped  
Campus**



**Opulent Collection  
of Myriad Library  
Resources**



# PROFESSIONAL ENRICHMENT

01

360° Development of Students  
in Education &  
Concurrent Domains

02

Enhancing the Scientific  
Aptitude of Students

03

Comprehensive Grounding in  
Technological Concepts

04

Nurturing Knowledge,  
Key Skills & Capacity  
for Learning

05

Building the Inquisitiveness  
for Learning & Innovations

06

Competency Building for  
Professional Enrichment



## ADMISSION PROCESS

The outbreak of COVID-19 has worked as a catalyst for the educational institutions to grow and opt for platforms with technologies, which have not been used before. We are determined to provide extensive admission support and counselling to the aspiring students and their parents.

For the academic year 2021-22, the admission to the institute will be through an online process. When the admissions are declared, the aspiring candidates need to apply online through the university website. The admission process for the last academic year was also under-taken online. The experience of this online admission process was quite beneficial for the parents and students fraternity.

## 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%**

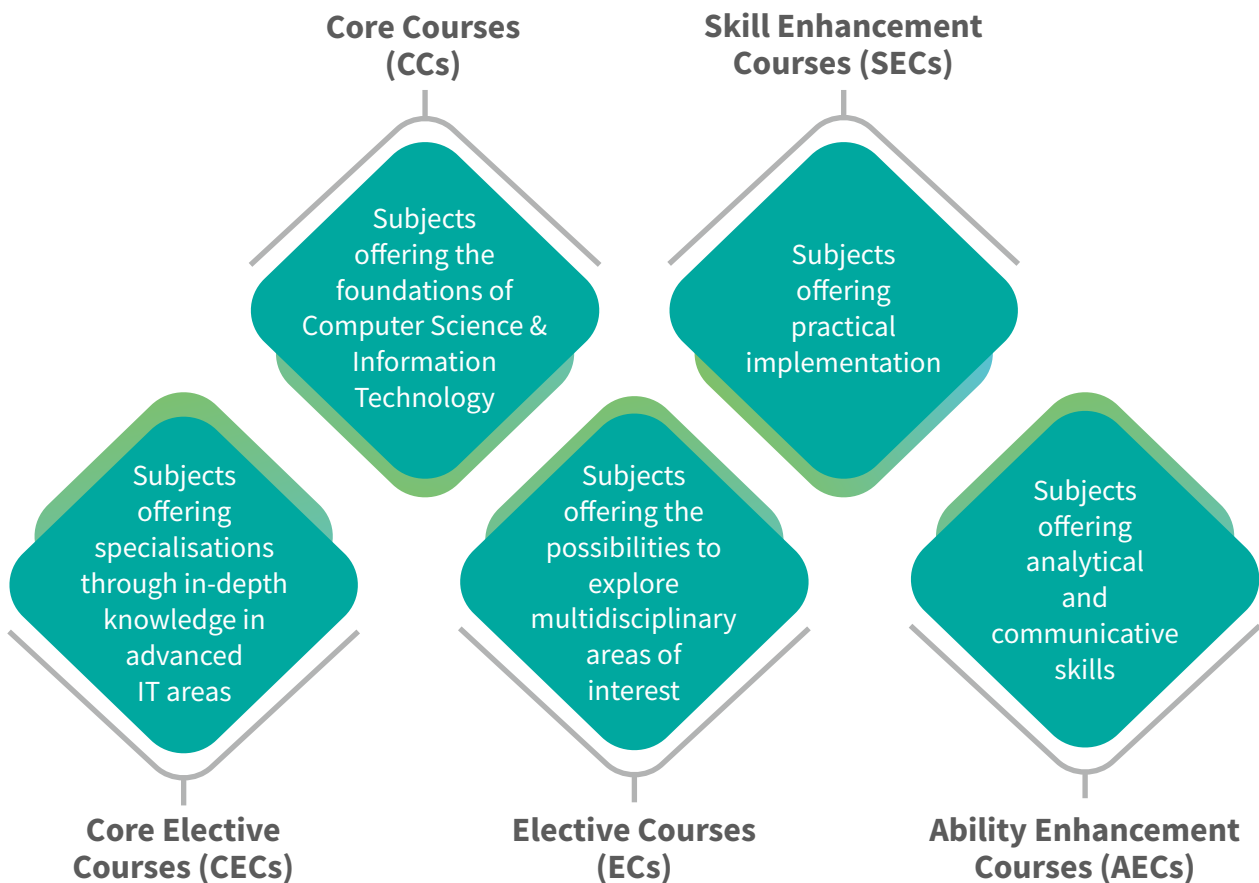
• For Reserved category candidates **40%**



# THE CURRICULUM

The Integrated MSc (IT) Programme is a package for learning computer science and applications to suit the needs of students to keep pace with the advancements in the discipline and the quality level expected for making careers in the domestic as well as globalized industries.

All the foundational subjects are well covered with theoretical and practical exposure for skill development. Special emphasis is laid on implementations through Open Source Platforms as a vehicle for learning the Computer Science subjects.





# COURSE STRUCTURE

## Sem. 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 HTML5
- Publishing & Multimedia Tools

### Ability Enhancement Course

### Elective Course

## Sem. 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

## Sem. 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

## Sem. 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

## Sem. 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

## Sem. 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

## Sem. 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

## Sem. 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



# COURSE STRUCTURE

## Sem. IX

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

## Sem. X

- Opportunities in Emerging Technologies
- Industry Internship

### 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

### 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

### CORE ELECTIVE COURSES

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





## MAKING WORLD A SMARTER PLACE !!!

IT has been a pioneer in bringing millions of people together beyond the physical boundaries of the Globe. The IoT technologies create a constellation of objects and devices that connect people and peripherals. From personal wearables to city-controlled amenities, nearly everything seems to join the network of “Smart” devices. IoT technology has the potential to be utilized to combat the COVID-19 pandemic. To convert education in a way that would utilize knowledge and technology both together, we encourage students to develop various projects on IoT or Embedded Systems using Arduino and Raspberry Pi.

## IF THERE'S A PROBLEM... HACKATHON HAS A SOLUTION !!!

Hackathons are competitive platforms for creative problem solving with a collaborative approach to tackle real life challenges. The Governments have introduced Hackathon as a pioneering series of interventions through initiatives at International, National and Regional levels to promote the concept and leverage the technical skills of the student. Under the aegis of various competitions held across various online and offline platforms, few “Out of the Box” innovative solutions are proposed by students on Multidisciplinary fields of Social Relevance. Over the years, students of FCAIT have participated at various International, National as well as State level Hackathon Competitions.

- **Challenging Themes** – Healthcare, Security & Surveillance, Robotics & Drones, Waste Management, Smart Devices & Communications, Agriculture and Rural Development, Urban Welfare



100+

Participants

10+

Hackathon Events

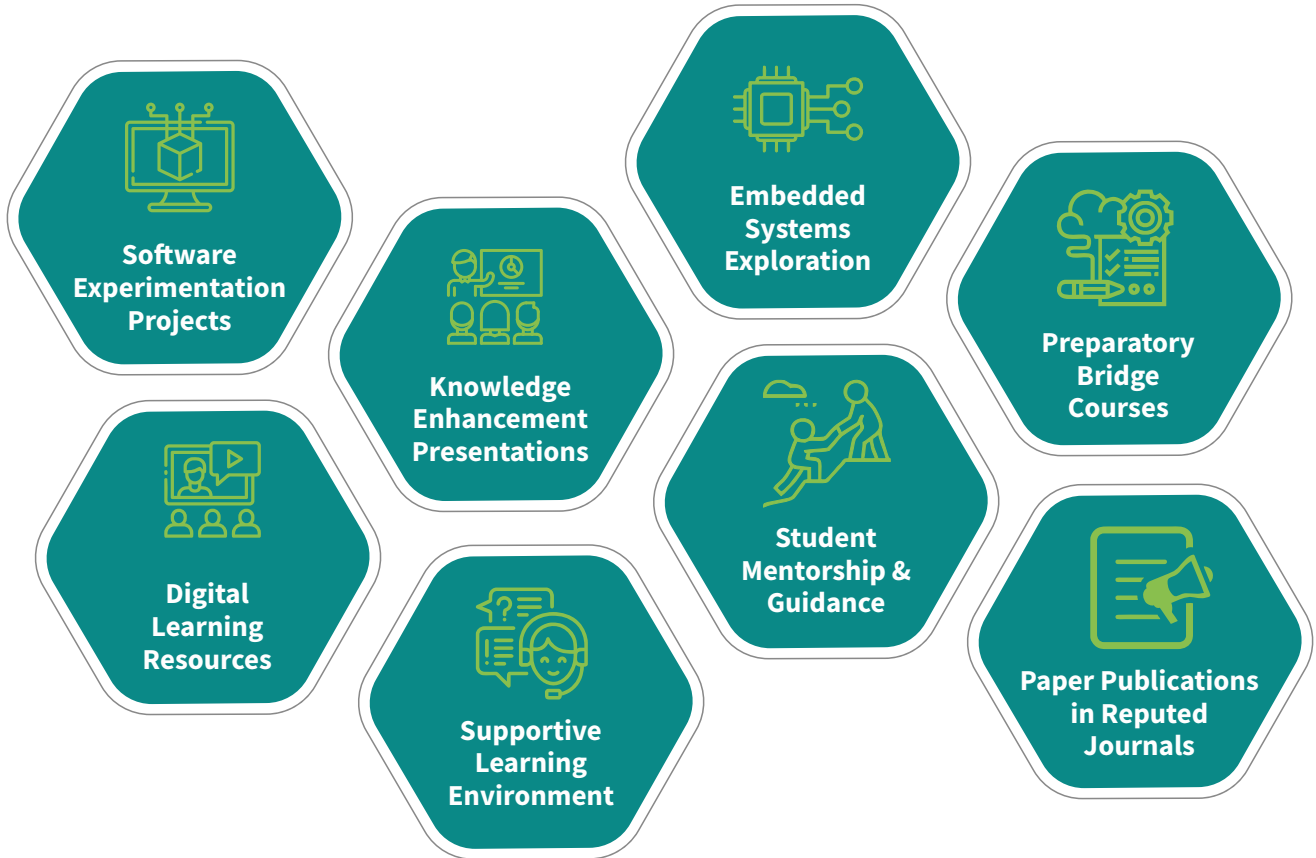
30+

Teams & Mentors

6+

Team Winners

# TOWARDS ACADEMIC EXCELLENCE



IDEAS  
CONCEPTS  
**RESEARCH**  
INSPIRATION  
**CREATIVITY**  
INNOVATIONS  
BRAINSTORMING  
DEVELOPMENT  
**TECHNO**  
**LOGICAL**  
ENRICHMENT



# SCHOLASTIC ACTIVITIES

## TECH TALKS



Futuristic Technology Oriented TEDs

## CODE EXPRESS



Coders Competing to Solve Real Life Practical Challenges

## CYBERSHADEZ



Platforms to Showcase the Technical Talents for Students

## INDUSTRIAL VISITS



Exploring Different Dimensions of Technologies in Various Industrial Process

## EXPERT LECTURE SERIES



Insights of Experts on Most Updated Knowledge & Technological Advancements

## LIVE PROJECTS



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

## SEMINARS



Industry Experts Delivering Updated Technical Knowledge

## EDUCATIONAL TOURS



Gain Insight Beyond Textbooks

## WORKSHOPS



Grounding Technological Concepts through Hands On Training



# CO-CURRICULAR ACTIVITIES

## YOUTH FESTIVAL



Platforms to Showcase Multifaceted Talents of Students

## SHADEZ



Extravaganza of Talents, Performances & Shows by the Students

## GUEST LECTURES



Guiding Students through Life Choices & Career Guidance

## ISR / NSS



Awareness about Social Assets & Responsibility

## CWDC



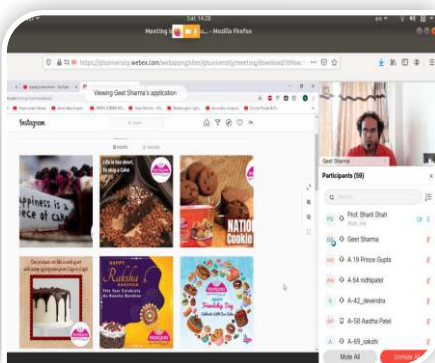
Empowering Women & Encompassing Security

## SPORTS



Towards an All-Round Development of Students

## LIVE VIDEO LECTURES WITH TECH EXPERTS



Face-to-Face with the Who's Who Around the World

## DKOSMOS



Magazine to Vitrine Students' Writing Skills

## ALUMNI MEETS



Rekindling the Memories & Associating the Experiences

# GLOBAL COLLABORATIONS



## 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 reputed local as well as national level companies and at most appropriate job designations. It actively organises various placement support activities such as mentoring and preparing students for facing interviews, building an effective resume, pre-placement talks, placement registrations and guidance.



More than  
**95%**  
of students of  
1<sup>st</sup> batch placed at  
prestigious  
organisations

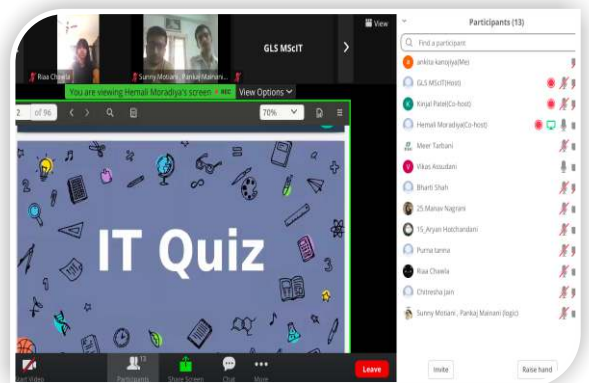
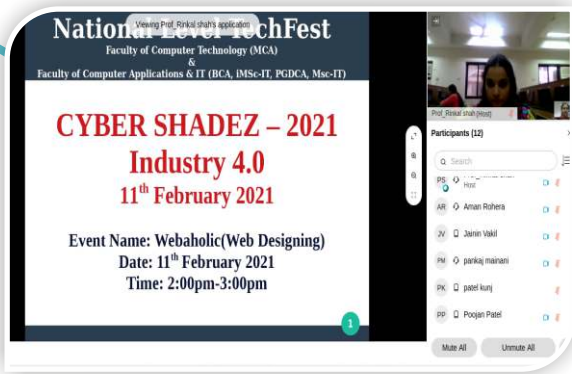
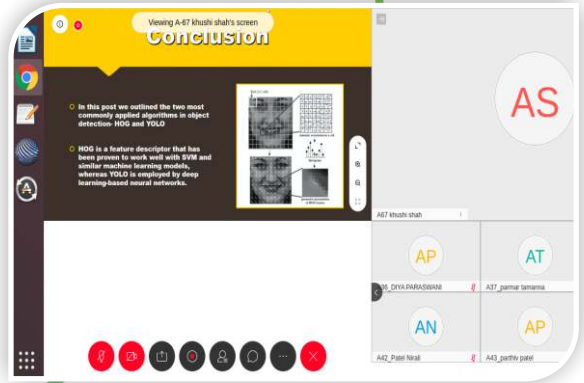
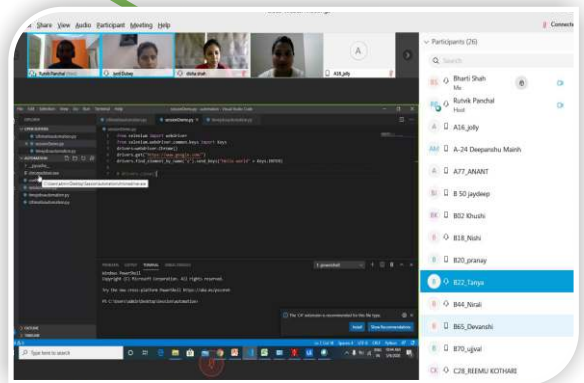
**75+**  
Reputed Companies  
offering  
placements



# TIME TO UNLEARN THE OLD, TO LEARN AND RELEARN THE NEW TO EMBRACE THE CHANGE

As a consequence of the pandemic, we had to rise beyond the limitations of physical presences in the classes making virtual interactions closer than reality. While the faculties had to strive to satisfy students learning process, the overall experience was found to be quite good both by the students and faculties. We look forward to pursue this pedagogy more gainfully if the pandemic situation disrupts the face – to – face classroom teaching process.

- Adopting Innovative & Interactive Teaching – Learning Processes
- Persistent Academic Progression of Students through Online Sessions
- Proactive Pedagogies for Better Student Interactions
- Enhancing Technical Knowledge through Online Seminars & Workshops
- Seamless Safety Measures & Security Approaches Adopted Throughout the Infrastructural & Academic Undertakings
  - Adorning Masks
  - Thorough Temperature Screening Protocol
  - Promoting & Demonstrating Hygiene Behaviours
  - Maintaining Social Distancing



# SKILL ENHANCED DIPLOMA PROGRAMMES @ GLS UNIVERSITY

GLS University proudly offers series of skill enhanced Diploma Programs for their undergraduate students along with their conventional graduation programme. The following programmes equip the students for their career progression & enhancements:

## Diploma Programme in Strategic Management and HRM for Business Excellence

Strategic management provides overall direction to an organization and involves specifying the organization's objectives, developing policies and plans to achieve those objectives. It is important for the organizations to formulate and implement major goals and initiatives based on consideration of resources and an assessment of the internal and external environments in which the organization operates.

Companies are building smart strategies with quick, flawless execution. To deliver the same consistently, they need a talent pool. HR professionals have a unique perspective of on the businesses they work for. They become central to the company's functions by getting the right talent at the right time. It not only helps you work on the theory but also enables you to discover your own style of managing people. In entirety, it ties up with the overall organizational strategy and purpose.

### Objectives of the Program :

- To develop a strategically conceptual and analytical thought processes.
- To create an understanding of adapting the organization to its business environment.
- To create an understanding of the importance of HR as a strategic partner.
- To develop an insight of how the traditional HR functions have now to be aligned with Corporate Strategies to provide competitive advantage to the Organization.





## Diploma Programme in Small Enterprise Management

We all live in a VUCA world, and in the present time entrepreneurship is the critical factor needed to not just stabilize and grow the economy but also sustain the humankind on this planet. This program intends to equip students with a basic tool kit to develop their entrepreneurial potential and benefit them in their preferred pursuits of starting a new business or develop an innovative project within an organisation.

### Objectives of the Program :

- To develop entrepreneurs by inculcating and nurturing entrepreneurial skills and capabilities.
- To develop an Intrapreneurial approach within the organization.
- To work on the human potential to convert capacities into capabilities.
- To deepen and Update their business knowledge, understanding and practice.

## Diploma Programme in Business with International Foundation

The world is now a global economy. It is imperative for the present day youth to have global context of business and have insights into the logistics of international trade and cross-border investments as well as the cultural and ethical issues that are imbued in the practice of business around the world. This course shall help you approach and solve business challenges from an altogether new perspective. These skills are increasingly valuable to employers faced with the challenge of opening and integrating multiple markets and achieving cohesion and collegiality in increasingly diverse workforces.

### Objectives of the Program:

- Developing a deeper understanding in one's subject area and the ability to present, access and analyze relevant information to make reasoned and calculated business decisions.
- Learning the optimal usage of digital technologies to enhance personal and professional skills
- Work collaboratively in cross-cultural situations and develop intercultural awareness, understanding and competence.

## Award of Certificate

Students who successfully complete and pass the modules stipulated in the programme structure will be awarded two certificates from GLS University and Partner University.

## Partner Universities



# INFRASTRUCTURAL RESOURCES



## Faculty of Computer Applications & Information Technology Integrated MSc (IT) Programme



- 📍 GLS University Campus, Ellisbridge, Ahmedabad – 380006
- ☎ 079-26447638, 8866106226, 8949616528
- 🌐 [www.glsufcait.org/imscit](http://www.glsufcait.org/imscit), [www.glsuniversity.ac.in/i-msc-it.html](http://www.glsuniversity.ac.in/i-msc-it.html)
- ✉ [imscit@glsuniversity.ac.in](mailto:imscit@glsuniversity.ac.in), [imscit@glstica.org](mailto:imscit@glstica.org)

