Jawaharlal Nehru Institute of Education, Science
and Technology Research Trust, Nanded, M.S.

SMT. INDIRA GANDHI COLLEGE OF ENGINEERING

Accredited by NAAC with 'A' Grade in 2023

Affiliated to the University of Mumbai and
Approved by All India Council for Technical Education (AICTE),
Govt. of India and Govt. of Maharashtra
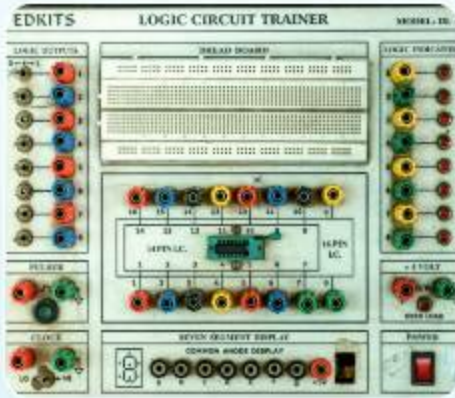
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Est: 1993

SMT. INDIRA GANDHI
COLLEGE OF ENGINEERING

PROSPECTUS

INTRODUCTION

Carrying forward the legacy of more than 30 years

Established in 1993, Smt. Indira Gandhi College of Engineering (SIGCE), managed by Jawaharlal Nehru Institute of Education Science and Technological Research Trust, Nanded, (JNI) remains committed to world class technology - focused education. SIGCE is an extension of the legacy of 30 - plus years of the trust, which runs various schools, colleges, technical and agriculture institutes and research centers in and around Maharashtra.

After successfully running at Koperkhairne, Navi Mumbai location from more than 2 decades the college has shifted to the sprawling, modern, state of the art infrastructure at Ghansoli, Navi Mumbai.

The Trust (JNI) which runs SIGCE, was established by Hon. Mr. V. M. Jadhav in 1985 and has more than 30 years of social impact in the field of education and research. It runs number of institutes dedicated to education, agricultural, entrepreneurship and technical research and has educated more than 10,000 students.

The management and faculty of SIGCE have a proven and successful track record of commitment to education excellence. SIGCE, which is affiliated to Mumbai University and approved by AICTE and Govt. of Maharashtra, provides pleasant and holistic environment, facilitating all round developments of the students.

DEGREE COURSES OFFERED

This College offers four year B.E. Degree Courses in the following five branches.

Branch	Duration	Intake
Computer Engineering	4 Years	120
Computer Science & Engineering (IoT & Cyber Security Including Block Chain Technology)	4 Years	60
Computer Science & Engineering (AI & ML)	4 Years	60
Artificial Intelligence (AI) & Data Science	4 Years	60
Electrical Engineering	4 Years	60
Mechanical Engineering	4 Years	60

VISION

To serve and have a transformative impact on society by constantly pursuing excellence in technical education, innovation and entrepreneurship for human development with strong ethical values.

MISSION

- Serve and help transform society by graduating talented, broadly educated engineers, equipped with state of art technology resources for developing sustainable solutions.
- Academic excellence in Science, Engineering and Technology through dedication to duty, commitment to research, innovation in learning and faith in human values.
- Cultivate the spirit of entrepreneurship and the connection between academia and industry that fosters problem solving through collaboration.
- Enable the students to develop into outstanding professionals with high ethical standards capable of creating, developing and managing global engineering enterprises.

ABOUT CHAIRMAN

Hon'ble Shri. Vitthalrao M. Jadhav

Founder President of Jawaharlal Nehru Institute of Education, Science & Technological Research Trust.

Former Member of Parliament (Rajya Sabha).

Before becoming Member of Parliament, Mr. V. M. Jadhav was an outstanding academician and held numerous academic positions like Asst. Professor & Professor at various Agriculture universities. His vision had a strong influence of eminent personalities like Dr. Raja Ramanna, Dr. A. P. J. Abdul Kalam, Dr. M. S. Swaminathan, Dr. Anil Kakodkar who he had a chance to work closely with.

As parliamentarian, he also served as member of constitution committee for Science, Technology, Atomic Energy, Space and Environment.

He is a staunch follower of Mahatma Gandhi and he strongly believes that education, research and innovation is key to nation's development. He also believes that right education and not just knowledge of facts is important for democracy to function.

As per our beloved Chairman - India has potential to develop globally competent students who will become wealth and asset of our nation. He strongly adheres to views of great leaders like Jawaharlal Nehru where he has stated that today's scientific labs and institutions are modern temples of India.

His aim for students graduating from this institute is that they should be internationally recognized in field of technical knowledge, entrepreneurship, research and should help causes of national integrations and development.

MANAGING TRUSTEE'S DESK

Mr. Sunil Jadhav
Managing Trustee / Director
B. E. (Hons) - Electrical and Electronics Engineering - BITS Pilani
M. S - Computer and Information Science -NJIT, New Jersey, USA
Chartered Financial Analyst (USA) Level 3 Candidate

After working in the US for 20 years in the various Wall - Street firms such as UBS and Citibank as senior executive, I took a decision to move back to India and dedicate myself to the cause of education and research. It was always my passion and dream to build a world class educational institute, focused on research, entrepreneurship development and emerging technologies.

Our commitment to you is plain and simple 'provide quality education,' which will help to create world class leaders. Our core belief is to serve and have a transformative impact on society by constantly purusing excellence in technical education, innovation and entrepreneurship for human development with strong ethical values.

Entrepreneurship & Start - Up Incubation Center : India is regarded as the third - largest tech startup hotspot in the world, as per reports by NASSCOM and global management consultant, Zinnov. It is anticipated that the growth is expected to more than double by 2020 with about 11,000 new startups.

The country's education system is also focusing towards entrepreneurship, with college curriculums being shaped in such a way to promote out - of - the box thinking in product development and marketing.

In this regard, Smt. Indira Gandhi College of Engineering (SIGCE) established in 1993, is making a world of difference by building a strong ecosystem for startups by training its students to take a lead in innovation and disruption at its newly - minted state - of - the - art campus at Ghansoli, Navi Mumbai, where our prime focus is on Practical training, emerging technologies, industry - academia collaboration, innovation and incubation center for start - ups to achieve its vision.

Our collaboration with Lemon Ideas and Lemon School of Entrepreneurship has already started yielding results with Innovation and Start - up completions like iNNOPRENEUR'18 and launch of incubation center with successful incubating various start - ups like Ignisova Robotics, Logic Integration, Maverick Den etc.

Industry - Academia Collaboration : With my experience and industry relations, we will make our existing industry - academia collaboration to be one of the best in India. Our MoU's with Relaince Jio and Advance Technology Institute, ASR Industries and Leading India initiative has given us platform for setting up advance telecommunication labs and training students in various employable skills via hands on internship training and advanced research.

Training and Placements : Our focus is to cater to aspiration of all the students, whether they want to enter workforce after graduation, go for higher studies further or be an entrepreneur. Our target is 100% meaningful employment to all eligible candidates. We will continue to enhance our training and placement cell which will help produce talented employable students. We have been successfully conducting various jobs fairs and professionally training students in soft skills and interpersonal skills. We also have launched special in - house training programs to polish engineering students with the soft - skills needed for their onward journey in their career.

Alumni : I am proud to state that our alumni fraternity is spread all over the world providing leadership to some of the top companies in the world, including Google, Paytm, Microsoft and IBM, just to name a few and we will continue producing world class leaders. Recently we celebrated "Sangam" - Silver jubilee Alumni meet which was attended by more than 1000 alumni, so came to visit their alma matter from all over the world.

In conclusion, I welcome you to this great institute. With our experience and commitment to excellence, you will definitely have a great future and in turn make us and our nation proud.

SECRETARY'S DESK

Ms. Sharmishtha S. Jadhav
Secretary JNIESTRT

Introduction

- Pioneer in Development of women in Indian Aviation Sector.

- First women commercial pilot from Marathwada region, Second women pilot from Maharashtra State and in India among the first batch of the lady pilots.

- Instrumental for introducing first batch of women pilots in the Indian Air Force with her unending rigorous and persistent efforts.

- Studied "Education Innovation and Social Entrepreneurship in Comparative Perspective" at Harvard University, Boston, USA.

Message

Education is the most powerful weapon to change the world. With experience of working over two decades in USA and in India it is my vision to make our institute one of the best in the world.

Education means when you know better, you do better. With this belief we are educating our students with expectation to change the world for better. One's character is developed through education and so our effort is to develop every student's character for their bright future through education.

TRUSTEE'S DESK

Ms. Ashvini Jadhav
Trustee Member

Introduction

B.Com, MBA (HR) from Mumbai University
Working at JNIESTRT for over a decade

About :

Ms. Ashvini Jadhav has played a pivotal role in establishment of institutes in Navi Mumbai. Incharge of the most popular cultural festival of SIGCE "IGNITE" for over 2 decades, has also established herself in the Entertainment Industry by acting in Hindi Theatre, Gujarati Films and Hindi serials. She has produced Hinglish play with Television artists, exhibited in "Tata NCPA" was on board of Censor Board For Film Certification (CBFC) as a nominated member for 2 years. Winner of WOW Awards (Women's Achiever Awards) as an independent Entrepreneur and Socialite.

A philanthropist at heart, who believes in giving back to the society with her never - ending quench for learning has motivated her to uplift and benefit the Society by becoming a Counsellor, META - Health Practitioner & Certified Access Bars Facilitator. She has also attended Landmark Forum & Re - birthing Breath Work.

Participated in Times Women's Drive for awareness on Breast Cancer in 2018.

Believes in educating the Youth of the Nation to Re - build a better tomorrow. Working as a Trustee Memeber of JNISTER Trust which comprises of 23 Educational Institutes has helped her evolve as an Entrepreneur and Socialite.

Message

Education is the key to individual, social, political and world development. At JNISTER we are committed towards providing the best exposure in education and industry to our students. It is our duty and responsibility not only to graduate students, but also create an awareness of business, personal ethics and values, develop socially responsible human beings. As the Trustee member of this institute, I am committed to constantly strive towards the well being of society.

PRINCIPAL'S MESSAGE

Dr. Sunil Chavan
Ph. D. (Electronics Engg.)

SIGCE, an engineering college with a legacy of thirty years of sound contribution to Engineering, Research and Science. It is a quest for the empowerment of Engineering Society by providing quality education in the campus. An institution with a keen interest in creating an atmosphere for the engineering aspirants to Know, Learn, Experience, Practice, Implement and find the solutions to the present and future challenges of Engineering. Campus keeps on creating ample of opportunities for the students to learn and relearn through lectures, Practical, Seminars, Workshops, Expert Guest Lectures and various innovative learning methods.

We the institute have well designed system to empower students with career skills. Engineer is not just a technical hand but an individual embedded with various soft skills, such as Time Management, Negotiation skills, Proactiveness, Assertiveness, Leadership approach, Positive attitude. Most importantly an ethical Human Resource to the nation. We groom our students for not only the prosperous future but a dignified life at large.

Institute doesn't believe in just producing employable engineers but we produce opportunities for the students to evolve as Self - Employed entrepreneurs and employers. Mavrick is Robotic and Innovation center providing students their first hand experience and research in the field of Computers and Technical Languages. Incubation center is the properly organized and executed cell for the budding engineers to become innovative self empowered business persons. We do have CEGC (Competitive Examination Guidance Cell) which caters the need of the students preparing for competitive examinations like UPSC, MPSC, GATE and other engineering competitive examinations for bright career opportunities.

Smt. Indira Gandhi College of Engineering asserts the value of sound mind and Healthy body, we organize the Yoga and Meditation campaign in collaboration with experts in Health and Spirituality. "Vipassana" is a spiritual program institute organizes frequently to develop the psychological and ethical attributes of our students.

As the Principal of the institute, I welcome you all to build up your incredible life.

COLLEGE HIGHLIGHTS

Our Unique Selling Proposition :

- Campus : Sprawling new state of the art Campus.

- Incubation Center : Full functional incubation center ecosystem to promote start - ups.

- Industry - Academia Collaboration : Dedicated floor for industry sponsored labs and courses, internship and placements.

- Advanced Labs : Robotics, Mechatronics, Artificial Intelligence, 3D Printing offering hands on learning and Training courses.

- Emerging Technologies : We offer certified courses in collaboration with industry expert in AI, Blockchain, Big Data, Internet of Things etc.

- Placements : 100% placement assistance with specialized employability skills enhancement program.

- Scholarship : silver Jubilee Commutative Scholarship to eligible students.

Special Features :

- Graded "A" for 5 years by NAAC (National Assessment and Accreditation Council)
- Honours Degree from University of Mumbai in Mechanical and Electrical Engineering with following minors.
  - Artificial Intelligence (AI)   ◦ Machine Learning (ML)
  - Internet of Things (IoT)   ◦ Cyber security
- Free certified soft skill and technical skill development program.
- SIGCE is now "Placement Capital" of Mumbai with more than 200 campus placement drives with 100% placement guarantee to qualified candidates.
- Start-up incubation centre– For start-up Mentoring and funding
- Training and workshops for competitive exam/GATE/GRE etc.
- Education partner for "Thane - Belapur Industrial Association"
  - Collaboration for Industry Solutions and Industry sponsored labs.
- Zonal Leader "Leading India in Artificial Intelligence".
- "Earn while you learn" scheme with lucrative internship opportunities.
- Scholarship, fee waivers, educational loans available for deserving candidates.

Laboratories & Workshop :

The College has well equipped laboratories for Advanced Computing, Multimedia, Graphics, Database, Software Engineering, Computer Center, Unix Lab, Digital Signal Process Lab, Integrated Circuit Lab, Microprocessor Lab, Electrical Machine Lab etc.

Library :

Library with an area of more than 5000 sq ft, has been successfully catering to the needs of all the students and staff of the college. There is separate internet and multimedia center and reprographics center in the library which provides internet access and reprographics facilities respectively to the students and the staff of the college. The college has above 27,000 books in library and has good number of National and International Journals.

ADMISSION PROCESS

(A) **Eligibility criteria for First Year (FE) Admission & Direct Second Year (SE) Admission :**

Please refer Govt. of Maharashtra / DTE rules at *"https://cetcell.mahacet.org/"* for eligibility criteria.

(B) **Issue of Application Form & Information Brochure :**

Application form for admission under Institute level and Seats remaining vacant after Cap round, will be available in college office between 9.30 am to 5.00 pm.

(C) **List of documents to be attached along with Application form :**

Candidates seeking admissions must submit Application Form completed in all respects in office as per schedule / dates announced by Principal of the college Incomplete applications will be rejected.

(D) **Documents to be Submitted for Admission :**

Attested copies of the following documents are to be submitted with application form.

1. SSC (Std X) mark sheet + 4 sets of photocopies.

2. HSC (Std XII) mark sheet + 4 sets of photocopies. (Optional for Direct S. E.)

3. School leaving certificate after passing HSC (Std. XII) + 4 sets of photocopies.

4. MHT - CET / JEEE Score card + 4 sets of photocopies. (Optional for Direct S. E.)

5. For Backward Class Category Candidates : Caste Certificate / Caste Validity certificate & Non creamy layer Certificate (if applicable) + 4 sets photocopies.

6. Migration Certificate + 4 sets photocopies (if applicable)

7. Five passport size photographs.

8. Any other document needed as per claims of student + 4 sets of photocopies & as per DTE guidelines.

9. Diploma marksheet / Provisional and Migration certificate for Direct SE students + 4 sets of photocopies.

10. Income Certificate

RULES REGARDING ADMISSION

Cancellation of Admission :
Cancellation of admission and refund of fees for CAP and Institute Level seats will be as per rules formed by Govt. of Maharashtra / DTE from time to time.

Issue of L.C and other Certificates :
Request for Leaving Certificates should be made in writing at least seven days in advance stating General Register Number, year of passing and date of leaving. Certificates will be issued only if the tuition and other fees due are fully paid, all the library books returned and Identity Card surrendered. Leaving Certificate for the students who have failed or who wish to discontinue their studies, will be issued only on submission of written application duly signed by the parent / guardian of student.

A fee of Rs. 100/- need to be paid as per the University Rules, if L.C. is asked within a year on leaving the institution. Thereafter Rs. 50/ charged for every year subject to a maximum of Rs. 200/- A fee of Rs. 500/- will be charged for issuing duplicate L.C. in the event of having lost or misplaced original L.C. provided the applicant produces an affidavit.

Refund of Deposit :
Refundable deposit amount will be paid to student on submission of original fee receipt within a year from the date of leaving the college or due to either discontinuing studies or after passing the degree course. If no claim is made within a year, the amount will be treated as lapsed and transferred to institution fund.

Admission in Other Institutes :
A student who has secured admission in this institute, cannot take admission in any other institute in between the course without the permission of the Principal, in such case student shall be liable for discontinuity from college.

Notice Boards :
All student are required to read the notice boards daily for last date of payment of fees, return of library books, submission of term work & examination form, shortage of attendance, academic progress, schedule of class test and dates of university examination, all type of scholarship & freeship related notices etc, failing to do so may lead them in to the action taken by principal in the form of fines or other consequences. It will be the sole responsibility of the students and their parents / guardians to keep themselves informed with the notices put up by the institute time to time.

Changes in rules :
The general rules enumerated above may be modified or altered at any time by the institute.

DEPARTMENT OF BASIC ENGINEERING, SCIENCE & HUMANITIES
(FIRST YEAR ENGINEERING DEPT.)

The Applied Sciences & Humanities Department equips first - year students with fundamentals in the applied sciences, basic engineering courses and subjects in the domain of humanities. Courses such as Structured Programming Approach, Basic Electrical Engineering, Applied Physics, Applied Chemistry, Engineering Mechanics and Engineering Drawing are an integral part of the engineering curriculum and an prerequisites to Engineering and Technology. The Applied Mathematics course prepares students for mathematical concepts and applications in higher semesters. Courses in Communication Skills and Environmental Science help familiarize students with corporate, social and ethical practices, making them meaningful contributors of knowledge to society. The department has a well equipped workshop and drawing hall to introduce the fundamental engineering concepts to the beginners. The department has highly qualified and well experienced faculty members to make the students well varsed with the engineering subjects. Continuous efforts are being taken by all the faculties to improve the performance of students.

Engineering Mechanics Lab

Engineering Mechanics is one of the important subjects which deals with mechanics of various structures and components. The results determined at laboratories ensure about safety, strength, rigidity, reliability and behaviors of mechanical beams, trusses, joints and other technological aspects, It is thus significant to acquire sound theoretical knowledge coupled with practical inputs observed at laboratories, As per the requirement of the revised syllabus, lab is spacious and well equipped with different apparatus such as force table, beam reaction, bell crank, leaver friction, fly wheel, compound pendulum etc.

Engineering Drawing

Engineering Drawing is the language of engineers . It is a starting point of all engineering branches. There is well equipped Drawing Halls which is fully spacious, illuminated and ventilated a pleasant condition for students. All necessary and required Drawing charts and models are available in Engg. Drawing Hall. As per the requirement of revised syllabus, separate AutoCAD lab with recent version (2008) of Auto CAD software is established.

Auto CAD Lab

Auto CAD is most widely used modeling package in today's industrial development, for preparing drawings of all engineering component, designing mechanical engineering parts and modeling civil engineering structures, We Explore students the basic knowledge of engineering drawing with the help of computer. We conduct practical to perform two dimensional views, isometric views, lettering, dimensioning & sectional views etc.

Basic Electrical & Electronics Engg.

BEE Lab is well equipped with Kits for all the experiments in the syllabus. The lab is equipped with required measuring instruments like Ammeters, Voltmeters, Multimeters & Watt meters. The Lab is also equipped with all required components like resistors, inductors, capacitors, transformers motors & load banks. We have well experienced technical staff. Student perform following experiment under the guide of faculty

1. Mesh and Nodal Analysis
2. Verification of Superposition Theorem
3. Verification Thevenin's Theorem
4. Study of R - L series and R - C series circuit
5. R - L - C series resonance circuit
6. R - L - C parallel resonance circuit
7. Relationship between phase and line currents and voltages in 3 - phase System (star & delta)
8. Power and phase measurement in three phase system by two watt meter method.
9. O.C. and S.C. test on single phase transformer 10. Half wave and full wave rectifier circuits.

Structured Programming Approach Lab

As per the requirement of today's industrial development, we explore students the basic knowledge of Structured Programming Approach with the help of C language, C is a high - level structured oriented programming language. It is mainly developed as a system programming language for operating system. We conduct practical on construct of Algorithms and Flowchart, Fundamental of C - Programming, functions and Parameter, Arrays, String, Structure and Union, Pointer and files etc. For implementation of above concepts with the help of Turbo C / C++ software on windows or open source Operating System.

Applied Physics Lab

The Applied Physics laboratory is well equipped with latest apparatus of fiber optics, high quality cathode ray tube oscilloscope, function generator, LASER beam. Ultrasonic generator models of crystal cells, Newton's ring's apparatus and cathode ray to measure e / m ratio.

Applied Chemistry Lab

Chemistry laboratory is well equipped with latest apparatus used for testing viscosity, flash point, fire point, etc., and volumetric methods, calorimetric & conductometric methods are also used for the estimation techniques of various elements.

Applied Mathematics Lab (SciLab)

Sci - Lab has been developed for system control and signal processing application. Key feature of the SciLab syntax is its ability to handle matrices; SciLab provides a variety of powerful primitives for the analysis of non - linear systems. Integration of explicit and implicit dynamics systems can be accomplished numerically. Sci-Lab is introduced in applied Mathematics - I, II, III & IV to study Curve tracing, Solving ordinary differential equations of 1st order and 1st degree, Evaluation of double and triple integrals, Intersection of surfaces. The general philosophy of SciLab is to provide a sort of computing environment.

Workshop

The subject workshop practice has become equally important to the engineers engaged in the production of various types of machines and tools. The ability to work skillfully with hands, can be developed more readily and accurately, when the work to be performed in the shop floor it is necessary for students to understand both in practical and theoretical aspects. Spacious, fully ventilated workshop includes Fitting section, Smithy section, Carpentry section, welding section, Machine Shop, Sheet metal working and Electric wiring etc.

Environmental Studies

In recent years environmental science has emerged as an important discipline that can offer solutions to many environmental problems. In EVS students get an exposure to varied subjects such as bio-diversity, microbiology, pollution control methods, disaster management, environment impact studies and conservation of natural resources. Increasing public awareness on the importance of conserving the environment has led many universities to adopt the programme into their curriculum.
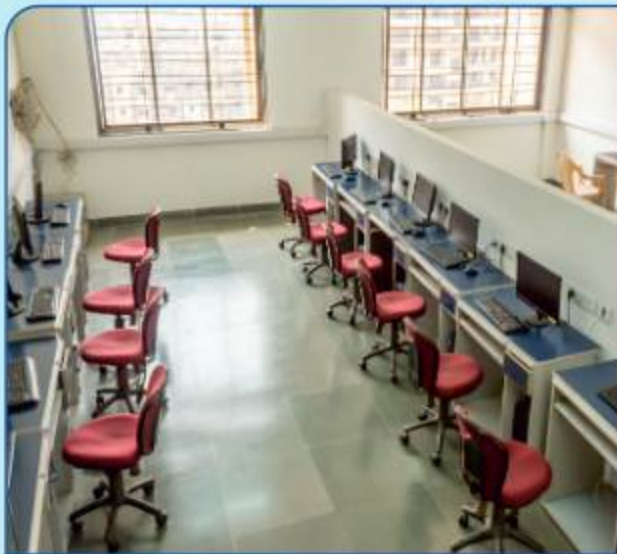
Language Lab

We do have a well equipped language laboratory of ETNL which enables students to develop LSRW The language laboratory is an audio or audio - visual installation used as an aid in modern language teaching. The language laboratory is very useful for assessing students' speech. It provides students with the technical tools to get the best samples of pronunciation of the language. The electronic devices used in the laboratory will stimulate the eyes and ears of the learner to acquire the language quickly and easily. The laboratory has a collection designed to assist learners in the acquisition and maintenance of aural comprehension, oral and written proficiency, and cultural awareness. The language laboratory offers broadcasting, television programmes, web - assisted materials and videotaped off - air recordings in the target language. In short, a learner can get the experience of having interaction with native speakers through the laboratory. Hence, the language laboratory has become the need of the hour in any language learning process for communication.

DEPARTMENT OF COMPUTER ENGINEERING

Provides comprehensive and integrated studies of subjects in computer system architecture, computer networks, distributed computer systems, programming languages, system information and data management, artificial intelligence, computer science theory and computer graphics.

Key areas of work in this sector are IT industry, Internet Technologies, Data Warehousing, E-Commerce, Networking, Medical Transcription etc.

Computer Engineering Department consists of around 250 computers with latest version of Software Applications like Rational Rose, Oracle, Eclipse, .Net, Ubantu, Linux XADL, Dosbox, Windows Server XP, Visual - Studio and Many More., Labs - Basic Computing Lab, Linux Lab, Software Engg. Lab, Database Labs, Multimedia Lab, Computer Center - I (FE Lab)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (INTERNET OF THINGS AND CYBER SECURITY INCLUDING BLOCKCHAIN TECHNOLOGY)

Introduction:

Interconnected computers, mechanical and digital equipment, and the capacity to transport data across a network without the need for human-to-human or human-to-computer contact are part of the Internet of Things (IoT). Internet of Things (IoT) devices are web-enabled smart gadgets that employ embedded systems such as processors and sensors to gather and communicate and act on data from their surroundings.

The IoT's scope and application:

What is IoT? The Internet of Things (IoT) has taken the globe by storm. It has become a huge hit in a short period of time. IoT devices may now be automated thanks to improvements in AI and machine learning. As a result of this, IoT devices may now be fully automated using AI and machine learning applications. Because of this, the Internet of Things (IoT) has increased its use across a wide range of industries, including healthcare, automotive, and agriculture.

Cyber Security:

In the field of computer engineering, cybersecurity includes the following:
- It is the study of cryptography
- Cyber Conflict
- Computer Forensics
- A Cyber Kill Chain, Ethical Hacking, and more
- Vulnerability and Malware Analysis
- Security Design and Development

Cyber Warfare:

When a government utilises digital assaults like computer viruses and hacking to impair the critical systems of another, it is referred to as cyber warfare.
In the future, cyber attacks will be used alongside traditional weapons like guns and missiles to strike an enemy's infrastructure."

Cyber Security's Purpose and Uses:

Predictions and estimations:
- From $3 trillion in 2015 to $6 trillion in 2021, cyber crime losses will cost the globe a total of $6 trillion each year.
- 6 billion Internet users will be online by 2022 and 7.5 billion by 2030.
- Over the next five years, the world will spend more than $1 trillion on cyber security.
- It is predicted that a ransomware assault would take place every 14 seconds by 2020.
- More than 3.5 million cybersecurity positions would go vacant by the end of the next decade, up from the 1 million that were available in 2014.
- Almost half of all cyberattacks target small firms.

Blockchain Technology:

An unchangeable ledger known as the blockchain is used to record transactions and monitor assets in a corporate network. Intangible assets (such a home, a vehicle, or a sum of money) are other types of assets (intellectual property, patents, copyrights, branding).
A blockchain network can monitor and sell almost anything of value, decreasing risk and lowering costs for everyone involved.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)

What is artificial intelligence?

Computer science is concerned with artificial intelligence (AI), or machine intelligence, which differs from natural intelligence in people and animals. Any device that is able to comprehend its surroundings and take actions that increase its chances of attaining its objectives is considered a "intelligent agent" by definition. To describe robots (or computers) that simulate "cognitive" capabilities that people identify with the human mind, such as learning and problem solving, "artificial intelligence" is a commonly used phrase.

Machine Learning :

Machine learning is a hot issue in development firms that are seeking for new methods to use data to obtain a deeper knowledge of the company. To what end can machine learning serve as an addition?

With the right machine learning models, companies can keep track of their business's shifting landscape so that they can anticipate what&'s to come.

Machine learning models guarantee that the solution is always up to date since data is continually being added. To put it simply, you can forecast the future using machine learning and the most up-to-date and dynamic data sources. A kind of artificial intelligence (AI) known as machine learning allows a system to learn from data rather than by explicitly programming it.

Machine learning, on the other hand, is not an easy task. To enhance, characterise data, and anticipate outcomes, machine learning makes use of a few algorithms that iteratively learn from data. As the algorithms consume training data, more precise models may be generated using that data.

When you train a machine learning algorithm using data, the result is a machine learning model. When you feed a trained model data, it will provide an output. In the case of a predictive algorithm, for example, a predictive model will be created. A forecast will be generated for you based on the data used to train the predictive model.

Applications in the Real World:

- Using heuristic knowledge, a machine can generate a vast number of probable locations.
- Computers that can interpret human speech are known as "Natural Language Processing" systems.
- Explanation, advice and guidance for people, Plane gate allocation and dynamic ticket pricing are some of the functions of expert systems.
- System of vision using neural networks Visual input on a computer may be interpreted and comprehended. A variety of examples include spies, physicians, facial recognition.
- Using satellite pictures and speech and handwriting recognition, identify the places with the greatest levels of poverty.
- Industrial robots that can move, spray, paint, verify accuracy, drill, clean, coat, and carve are examples of intelligent robots.
- Artificial Intelligence (AI) Trends and Job Openings.
- An AI-related political talking point is inevitable. There will be gains and losses in employment.
- In the near future, logistics will become more efficient Artificial intelligence (AI) and cutting-edge robotics are combined in Amazon Robotics.
- It is expected that mainstream automakers will begin producing self-driving vehicles.
- Knowledge workers will benefit from machine learning.
- AI will be used to produce content.
- Artificial intelligence (AI) will be used to combat difficult illnesses (Covid-19, Cancer etc).

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Artificial Intelligence and Data Science is a new branch of study that deals with scientific methodologies, processes, and techniques drawn from different domains like statistics, cognitive science, and computing and information science to extract knowledge from structured data and unstructured data. This knowledge is applied in making various intelligent decisions in business applications. Artificial Intelligence and Data Science branch focuses on collecting, categorizing, strategizing, analyzing and interpreting data. It is a specialized branch that deals with the development of data-driven solutions, data visualization tools and techniques to analyze big data. It also incorporates the concepts of machine learning and deep learning model building for solving various computational and real-world problems.

About Artificial Intelligence (AI): Artificial intelligence is the simulation of human intelligence processes by machines, especially computer systems. Specific applications of AI include expert systems, natural language processing, speech recognition and machine vision.

About Data Science (DS): Data science is the domain of study that deals with vast volumes of data using modern tools and techniques to find unseen patterns, derive meaningful information, and make business decisions. Data science uses complex machine learning algorithms to build predictive models. The demand for data scientists is high, and the future of data science in India has extreme potential. There is a vast pool of talent, organizations investing in building strong data science teams, and plenty of opportunities to work on interesting projects.

Future Of Data Science in India: India is rapidly becoming a hub for data science and analytics, thanks to the country's vast talent pool and relatively low labor cost. The rapid growth of usage of Data science is driven by several factors, including the increasing availability of data, the rise of artificial intelligence, and the growing demand for data-driven decision-making. As more organizations recognize the value of data science, they are turning to India for help building their data science capabilities. This is good news for Indian data scientists who can enroll in Data Science Degree course in India for continued growth and opportunity in the years ahead. Data Science is an excellent career with many future growth opportunities.

What is AI used for in Data Science?
Data scientists contribute to the growth and development of AI. They create algorithms designed to learn patterns and correlations from data, which AI can use to create predictive models that generate insight from data. Data scientists also use AI as a tool to understand data and inform business decision-making.

Career Opportunities in AI and Data Science: AI and DS graduates will be able to design and develop intelligent business applications to solve various industrial problems. They use the latest tools and open-source technologies to recommend the required solutions. They can figure out how to evaluate the ethical, legitimate, proficient and social standards of engineering knowledge and practices. These graduates can also exhibit their domain knowledge in data handling, knowledge extraction, mobile and distributed application development, intelligence web/ecommerce development, database administration, computer hardware, networking, education and training and decision support systems using AI and Data Science tools and techniques.

DEPARTMENT OF ELECTRICAL ENGINEERING

Provides comprehensive & integrated studies of subject in electrical engineering designs and develop electrical machinery, systems and control machinery for generation and transmission of power. Electrical engineers find jobs in power plants, Railways, Aviation, Manufacturing Electrical Motors & Control Industries and Electrical Appliances Sector.

Electrical Engineering Department constitute of well equipped lab viz Basic Electrical & Electronics, Electrical Machines, Electrical Measurement & Switchgear, Electronic Circuit Lab, Computer Center, Control System Lab etc. with all advanced technological instruments.

DEPARTMENT OF MECHANICAL ENGINEERING

Mechanical engineering is known as the evergreen branch among all the other branches of engineering. Traditionally, mechanical engineers have to deal with concepts such as thermodynamics, robotics, kinematics, designing of mechanical elements, fluid mechanics and manufacturer science with their applications in Manufacturing Sector, Automotive Sector, Aerospace, Thermal Power Sector, Refrigeration and Air Conditioning Sector.

Through the excellence of its people, the Mechanical Engineering Department in Smt. Indira Gandhi College of Engineering will be recognized as a leader of its discipline in a manner that exemplifies the traditions of learning, discovery, and engagement. The department will be a desirable place to study and work, with our community comprising the best and the brightest, because of educational programs grounded in the mechanical engineering sciences and set within the context of meeting important societal needs. Major subject include fluid mechanics,
thermodynamics & heat transfer, materials engineering, manufacturing, energy systems, dynamics & control, Computer Aided Design (CAD) Computer Integrated Manufacturing (CIM), finite element analysis, mechatronics, robotics and others.

LIBRARY

SIGCE Library has a very rich collection of more than 27315 Books with 7534 titles, 36 National and International Journals and, 600 CD ROMs and DVD's, 500 Bound Volumes of Journals and 853 Book Bank Books etc. Library have several useful in-house digital resources like university question papers, syllabus and institutional archives are also available in the library.

SIGCE is an institutional member of DELNET, it provides access to more than 3.7 crore catalogue records of books, journals, articles etc. through discovery portal and also more than One crore and Fifty lakhs full text e-books, e-journals and e-articles through Knowledge Gainer Portal.

Library is fully computerized with application of Bar-code technology and well known Library management software namely SOUL. The software extends the facilities like Web-OPAC to search books and journals available in the library.

There is spacious reading room for students and staffs, separate Internet and Multimedia Center which provides unlimited internet access with 100 Mbps connection and free WiFi facility for students. Library also provides reprographics facilities.

LIBRARY RULES & REGULATIONS

1. The Library shall remain open on all working days from 8:00 am to 8.00 pm. The issue counter shall be on 10.15 am and closed half an hour before the closing of the Library.
2. Please **maintain silence** in the library and reading room. Use of **mobile phones is strictly prohibited**. If any user is found talking on the phone, strict action will be taken against that person.
3. **Students** will be **allowed** to use the library and reading room **during Free Periods only and after 5 pm.**
4. Each student can **borrow 3 books** on their card for a period of **15 days.**
5. Ordinarily, the book (s) (in demand) will not be re-issued.
6. A Late fine of Rs. 1 will charged per book per day.
7. No books will be issued if the fine crosses Rs. 100. for individual. Issue of books will not be resorted once the dues are paid.
8. Any Library material is taken out of the library for photocopying will have to be returned within an hour. Necessary action will be taken against defaulters.
9. Students should inspect the condition of the book before borrowing it and inform the Librarian about the missing or torn pages if any. The concerned student will be held responsible for the same. Later at the time of returning the book.
10. If a book is lost, the concerned person has to replace the lost book, or pay it's Double price, as well as the fine.

EXAM SECTION

The exam section is responsible for conduction of all University and College exams including the preparation of results of exams conducted in college for Sem. III, IV, V & VI. Also conducts re-verification and providing the Photocopy of exam answer papers of students of college exam. Total liaison with University. Collection of exam forms of all the students, scrutinizing and sending the forms to the University along with exam fees. Display of results declared, display of circulars, notices related to examinations. Preparation of transcripts & recommendation letter for the students as required by students applying in foreign University for higher education, verification of student's academic carrier as requested by the employer for passed out students.

RESULT ANALYSIS

	2022-23		2021-22		2020-21	
	Passing (%)	Dist./First Class (%)	Passing (%)	Dist./First Class (%)	Passing (%)	Dist./First Class (%)
Computer Eng.	94.67%	90.14%	98.66%	98.64%	100%	90.90%
Electronics & Tel. Eng.	71.05%	62.96%	89.28%	98.00%	100%	85.41%
Electrical Eng.	66.88%	56.07%	92.02%	97.63%	98.59%	94.28%
Instrumentation Engineering	–	–	–	–	100%	45.45%
Mechanical Eng.	70.67%	41.50%	92.59%	100%	–	–

DEGREE CERTIFICATE DISTRIBUTION CEREMONY

Mr. Nishant Joshi
I/c Exam Section

TRAINING AND PLACEMENT DEPARTMENT

Training & Placement cell conducts campus interviews, carrier counseling & personality development programs. Reputed industries & Multi National Companies are invited for campus interviews and majority of the eligible students are employed.

Our Esteemed Recruiters

STUDENTS ACADEMIC ACHIEVEMENTS

Computer Engineering

2022-23
Palekar Karunesh Chetan Nutan	9.66
Magar Abhay Shivaji Anjali	9.61
Bhanushali Siddhi Satish Suchita	9.24

2021-22
Ansari Mohammad Gulam Mohammad Hasim Bibi Samima	9.69
Borge Bijay Vasudev Sharada	9.52
Chaudhari Mandar Suresh Deepashree	9.50

2020-21
Dere Vaibhavi Balkrishna Sandhya	9.40
Vathari Laxmi Shivanand Geeta	9.20
Vishwakrma Anjali Ashokkumar Mridula	8.98

Instrumentation Engineering

2020-21
Coutinho Rochelle Rocky Priscilla	8.49
Kenjale Pooja Hanumant Ranjana	8.25
Rawool Ajay Anil Archana	7.41

Electronics & Telecommunication Engineering

2022-23
Ansari Ammar Azad Shabana	8.69
Jadhav Pratiksha Dayanand Shraddha	8.63
Gupta Neha Sayadev Babita	8.56
Pawar Shweta Anil Malan	8.56

2021-22
Dhokrat Janak Ghansham Bharti	8.79
Bolke Nilesh Baban Shashikala	8.48
Salvi Priyanka Prabhakar Ranjana	8.66

2020-21
Dharne Vitthal Atmaram Akshata	8.89
Jadhav Akash Bhiwaji Sangita	8.71
Banerjee Shreya Swarup Shampa	8.13

Mechanical Engineering

2022-23
Gupta Navin Rajkumar Rita	8.85
Bhande Kunal Ramesh Madhuri	8.67
Gowda Tilak Devappa Veena	8.63

2021-22
Nakum Ankit Savji Ranjan	9.13
Navale Sarvesh Ajit Shobha	9.13
Jadhav Sanjay Ravindra Kaushalyabai	8.90
Rade Sneha Shrikant Jayshree	8.83
Kadam Saurabh Sitaram Shashikala	8.83

Electrical Engineering

2022-23
Mohd. Mansur Mehraj Bi Fatima	9.14
Karmokar Chinmay Madhusudan Seema	9.14
Patil Sakshi Shashank Shalaka	9.14
Barkale Siddhesh Parshuram Rekha	9.05
Gupta Gaurav Siyalal Shanti	9.00

2021-22
Nandale Mayur Bapusaheb Vijaya	9.29
Ghude Shubham Shrihari Ranjana	9.28
Patil Vikrant Vilas Vrushali	9.26

2020-21
Jagtap Tejal Sanjay	9.1
Nagare Sonali Deepak	9.04
Bhave Shravani Sushil	9.08

B.E. Toppers List for Exam May/June - 2023

Sr.	Particulars	College Rank	M/F	CGPI	Branch
1.	Palekar Karunesh Chetan Nutan	I	M	9.66	Computer
2.	Magar Abhay Shivaji Anjali	II	M	9.61	Computer
3.	Bhanushali Siddhi Satish Suchita	III	F	9.24	Computer
4.	Ansari Ammar Azad Shabana	I	M	8.69	EXTC
5.	Jadhav Pratiksha Dayanand Shraddha	II	F	8.63	EXTC
6.	Gupta Neha Sayadev Babita	III	F	8.56	EXTC
7.	Pawar Shweta Anil Malan	III	M	8.56	EXTC
8.	Mohd. Mansur Mehraj Bi Fatima	I	M	9.14	Electrical
9.	Karmokar Chinmay Madhusudan Seema	I	M	9.14	Electrical
10.	Patil Sakshi Shashank Shalaka	I	M	9.14	Electrical
11.	Barkale Siddhesh Parshuram Rekha	II	M	9.05	Electrical
12.	Gupta Gaurav Siyalal Shanti	III	M	9	Electrical
13.	Gupta Navin Rajkumar Rita	I	M	8.85	Mech.
14.	Bhande Kunal Ramesh Madhuri	II	M	8.67	Mech.
15.	Gowda Tilak Devappa Veena	III	M	8.63	Mech.

MANAGEMENT AND ADMINISTRATION BOARDS & BODIES

GOVERNING BODY MEMBER

Sr.	Name	Position
1.	Mr. Sunil Jadhav	Chairman
2.	Mrs. Sharmishtha Jadhav	Trust Nominee
3.	Mrs. Ashvini Jadhav Bhagat	Trust Nominee
4.	Mrs. Shobhatai Jadahv	Trust Nominee
5.	(Ex-Officio) AICTE	Regional Officer (Ex-Officio) AICTE
6.	-	AICTE Nominee
7.	State Govt. (Ex-Officio)	DTE/State Govt. (Ex-Officio)
8.	-	DTE Nominee
9.	-	University Of Mumbai Nominee
10.	Mr Shridhar Navghare	Industrialist
11.	Dr. Sunil S Chavan	Member-Secretary
12.	Dr. V. P. Patil	Faculty Member
13.	Dr. Sandhya Mathur	Faculty Member
14.	Sumesh Menon	Industrialist
15.	Kaustubh Gokhale	Industrialist

ANTI-RAGGING COMMITTEE

Dr. Sunil S Chavan	Convener
Dr. V. P. Patil	Member
Dr. K. T. Patil	Member
Dr. B B Mulla	Member
Prof. Arun N Gawande	Member
Prof. Nishant Joshi	Member
Prof. V. Sardar	Member
Mr. Mahesh J Thombare	Member
Mrs. Surekha Phalake	Member
Mr. Satish Bamane	Member
Mr. N. G. Narayankhedkar	Member
Miss. Riya Jadhav	Member
Mr. Tejas Varkute	Member

INTERNAL COMPLAINT COMMITTEE(ICC)
महिला तक्रार निवारण समिती

Dr. Sandhya Mathur	Chair Person
Dr. Venkat Patil	Member
Miss. Dipti Chandran	Member
Mrs. Sarita Khedikar	Member
Mrs. Archana Jadhav	Member
Mrs. Vrushali Magdum	Member (NGO)
Mrs. Asha Kantekar	Member, Secretary

Grievance Redressal Committee for of students grievances "As per AICTES Guidlines'

Dr. Sunil S Chavan	Convenor
Dr. V. P. Patil	Member
Dr. Varsha Shah	Member
Dr. Jagdish W. Bakal	Member

ANTI-RAGGING COMMITTEE

Disciplinary Action Committee
Students Council

SEMINARS & WORKSHOPS

Our college has been actively conducting national level seminar and workshops in association with IETE & ISTE.

Skillup organize by Engineer Club

Linkdin Profile Building Workshop

Value Added Program on
AI powered opportunities

Seminar on Carriers in
Electrical Vehicle Industry -JAN 2023

Seminar on Study Abroad

Pathway to Entrepreneurship

INDUSTRIAL VISITS

Mechanical students IV at GTPS Uran Feb 2023

Industrial Visit to Microdevice Technologies

Mechanical students IV at CRESCENT cold storage TTC,
Mahape March 2023

Mahatransco Mahape - 220 KV 22 KV Substation

EXTRA-CURRICULAR ACTIVITIES

Technical Festivals, Seminars, Mini Project Competition, Industrial Visits & Annual Day Function are conducted every year which helps students to present their technical knowledge, arts & intrinsic qualities.

EnllGhtenment

STUDENT ACTIVITIES

Women's Day Celebration

Social awareness on AI IoT by conducting a session in a School

Beach Cleaning Drive

NSS Residental Camp Devad, Panvel

Swachh Bharat Abhiyan

Tree Plantation Campaign

EXTRA-CURRICULAR ACTIVITIES

Annual Function being enjoyed by the management & college staff. Students are seen giving their best in singing , Western & Indian Dances & Fashion Show

GENERAL RULES OF DISCIPLINE FOR STUDENT

I) Discipline: All the student are expected to maintain strict discipline within and outside the class rooms, workshop, library, laboratories and to observe the rules prescribed from time to time, they are also expected to show politeness and courtesy of speech, as well as observe cleanliness of dress. Any reported or observed objectionable conduct within or outside the institution on the part of student would make him/her liable for disciplinary action.

II) Dress and Appearance: All student must conform to the requirements of formal dress and appearance as required by the Institution.

   a) Student with any un-desired hair style, which is considered not in harmony with environment, are not allowed to enter the premises or remain in the campus.

   b) No Student shall wear improper dress like knee high skirt or Short & short shirt or low neck shirts.

   c) Student should be neatly dressed and it should not be inconvenient for carrying out practical etc.

III) Disturbance by irrational playing of instruments: No radio, transistor, tape recorder, mobile phones or musical instrument are permitted to be played in the campus. Any student found in possession of these instruments is liable for disciplinary action.

IV) Smoking Prohibition: Smoking is strictly Prohibited in the class rooms and college Premises.

V) Care of equipment and furniture: Severe penalty will be imposed when a student is found mishandling furniture or equipment, writing on walls or causing damage to the building or property of the Institution.

VI) Breach of Disciple: Any student who is persistently insubordinate of repeatedly or willfully mischievous or is guilty of malpractice in connection with the examination or has committed any act of serious indiscipline or misbehavior or who, in the opinion of the Principal has adverse influence on his fellow student may be expelled permanently or removed from the rolls for a specified period by Head of Institution.

VII) Identity Cards: Immediately after enrolment students of all courses should furnish three passport size photographs (6cm x 5cm) of front pose, one of which will be used on identity card. Students must wear identity card in college campus and should be produced whenever demanded. A fee of Rs. 100/- will be charged for issuing duplicate card.

VIII) Attendance: Attendance means attending all classes tutorial and practical in accordance with the schedule on all working days of the Institution. Absence for valid reason must be reported to the Head of the Department. As per University norms attendance should be minimum 75% for theory and 100% for practical. Students will be given warning for their low attendance through notice boards. If they fail to improve in attendance, they will be detained from appearing in the examination, Production of medical certificates and related documents will not compensate the shortage of attendance. Parents are advised to see that their wards attend the classes regularly.) forming Association: No society or association may be formed nor any union be made in the Institution without the prior permissions of the Principal and Management.

IX) Participation elsewhere: No student of this institution who is on the rolls of the institution can play or participate in any game or any cultural activity. In any other institution except with the specific permission of the Principal & Management.

X) Invitation to Outsiders: No one shall be invited to enter the campus or address the students without prior permission from Principal & Management.

Code of Conduct

1) Student should abide by guidelines issued by the principal from time to time.

2) Regular attendance at classes is mandatory. Strict action will be taken against those fail to do so.

3) On campus, student should carry their identity card at all times and produce it on demand by collage authority.

4) Submission of project and assignments in allowed time is compulsory.

5) If the students are found to be lagging behind in certain subjects, they will have to attend extra classes as notified and strive to make the required program and come at par with other student.

6) Student should read the notice displayed on the college notice board regularly.

7) Student found guilty of misconduct or indiscipline shall be subjected to serious action and may be expelled from the college.

8) The rules for discipline and code of conduct may undergo modification, addition, omission or alteration as the principal deems fit and proper. In this regard the decision of the Principal & Management it final, and binding.

ANTI - RAGGING POLICY

Maharashtra Prohibitions of Ragging Act 1999 which is in effect from 15th May 1999 has the following provisions for Actions against Ragging.

a)   Ragging within or outside of any educational institution is prohibited.

b)   Whosoever directly or indirectly commits, participates in, abets, or propagates ragging or outside and educational institution shall, on conviction, be punished with imprisonment for a term up to 2 year and/or penalty which may extend to ten thousand rupees.

c)   Whenever any student or, as the case may be, the parent or guardian or a teacher of an educational institution complaints, in writing, of ragging to the head of the educational institution, the head of educational institution shall, without prejudice to the foregoing provisions, withing seven days of the receipt of the complaint, enquire into the matter mentioned in the complaint and if, prime facie, it is found true, suspend the student who is accused of the offence, and shall immediately forward the complaint to the police station having jurisdiction over the area in which the educational institution is situated, for further action. Where, on enquiry by the head of the educational institutional institution it is found there is no substance, prima facie, in the complaint received, he/she shall intimate the fact, in writing, to the complainant. The decision of the head of the educational institution shall be final.

d)   If the head of the educational institution fails of neglects to act in the manner specified in section "d" above when a complaint of ragging is made, such person shall be deemed to have abetted the offence and shall, on conviction, be punished as provided for in section "b" above.

- Anti Ragging Committee is formed to ensure the continuation of the colleges's anti ragging policy.

- Disciplinary Action Committee is formed to ensure discipline in the college & confirmation to Rules & Regulation.

- As per Supreme court of India petition (s) No. 24295 of 2006 dated 16/05/2007 and Gazette of India dated July 4, 2009 regarding UGC regulation on Curbing the menace of ragging, 2009 if the applicant for admission is found to have indulged on ragging in the past or if it is noticed later that he has indulged in ragging, admission may be refused or he shall be expelled from the educational institution.

e)   The format of affidavit related to anti ragging to be signed by students and parents separately (as per The Gazette of India, July 4, 2009 (ASADHA 13, 1931) provided with prospectus should be submitted along with admission form

f)   More details are available at
https://www.ugc.ac.in/page/ragging-related-circulars.aspx

- Prohibition of capitation fee Act is as applicable.

Men at Work! (SIGCE Teaching and Non Teaching Staff)

SIGCE Teaching Staff

Our Women Power !

ROUTE MAP

Railway Route	Station	Time
Harbour Line	CST - Vashi - Ghansoli	CST - 60 min, Kurla - 30 Min.
	Panvel - Ghansoli	Panvel - 35 min., Nerul - 20 min.
Central Line	CST - Thane - Ghansoli	Dadar - 45 min., Thane - 20 min.
	Kalyan - Ghansoli	Kalyan - 40 min.
Western Line	Andheri - Wadala Rd - Vashi - Ghansoli	Andheri - 70 min

Pick up Point	Destination	NMMT	BEST
Ghansoli Station	SIGCE	9, 20, 55, 10	521
Vashi Station	SIGCE	9	-
Vashi Depot	SIGCE	9, 20, 55	521
Thane	SIGCE	8	-
Kurla Station	SIGCE	-	-
Dadar	SIGCE	AC 121, 121	521
Andheri / Borivali	SIGCE	123, 125	
Belapur	SIGCE	123, 125	