#### ENGINEERING PROGRESS OF LIFE



Partner of NEN, NPTEL CII & IIT KGP

Rich alumni network in top notch IT & Core Sectors

Collaboration with BOSCH INDIA, TCS, Ericsson, Volvo-Eicher, Jadavpur University & TATA POWER



MCKV GROUP ज्ञानम अजन्तम (Knowledge is infinite)





MCKV INSTITUTE OF ENGINEERING NAAC Accredited "A" Grade Autonomous Institute under UGC Act, 1956



### "Scientists study the world as it is; engineers create the world that has never been."

- Theodore von Karman Hungarian-American mathematician, aerospace engineer, and physicist.

### "Information is the oil of the 21st century, and analytics is the combustion engine."

- **Peter Sondergaard** Analyst & Head of Research, Gartner Inc.



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#### About the **INSTITUTE**



A pioneering 'Degree Engineering College' from the Howrah district in West Bengal, MCKV Institute of Engineering was established in the year 1999 with a vision to impart quality technical education to the minds of tomorrow. The college endeavors to achieve consistently high levels of academic excellence, improve standards in education and encourage application, implementation and a research oriented approach. With the view to foster young intellectuals and make them creative leaders in this competitive world, MCKV invites students to engineer their own futures.

MCKVIE is a partner of NPTEL, and has also signed MoU for academic collaborations with IIT Kharagpur, TATA Power, SAK Robotix Lab, the start-up centreof IIT Bhubaneswar, and some more.

Excellent performances by students in various academic settings and university examinations along with their

placement in top notch IT and Core sectors, showcase their growing knowledge base and application capabilities. Their excellent rate of success in cracking tough examinations like GATE, CAT and GRE continuously brings the next generation of bright minds to MCKVIE. Among accolades, awards and recognition from national level projects competitions, our students also present their research papers in international and national conferences where they are encouraged to network and connect with people in the respective fields and continuously update their knowledge on their area of expertise.

The Institute has been accredited by Tata Consultancy Services and has tie ups with both IT and Core sectors such as BOSCH INDIA, Dassault Systems, Volvo-Eicher, RABT Technology, M/s. Sigma Search Lights Pvt. Ltd., Tata Power, Texas Instruments, CII & NEN among many others.



To be a sustainable center of academic excellence and advanced research at national level producing students recognized for their academic competence, attitude and dedication.

#### 

- To create a vibrant learning environment in the Campus.
- To develop and enhance teaching learning quality.
- To have highly qualified faculty.
- To support application oriented research and encourage entrepreneurship.



- The Institute is committed to produce qualified, successful students, to suit to top class demand of the market.
- The Institute is committed to provide resources including human resources to cater to present as well as future requirements of the customer & stakeholders.
- It is reviewed for continuing suitability.

#### MCKVIE Now an AUTONOMOUS Institute

MCKV Institute of Engineering has recently been granted the Status of Autonomy, under UGC Act 1956, which is implemented in and from the Admission Session 2020-2021. Autonomy is a functional status provided to the college by the University Grants Commission and its affiliated University, Maulana Abul Kalam Azad University of Technology (MAKAUT) for ten years after two stages of verification by both the governing bodies. Being a NAAC 'A' Grade College, MCKVIE remains affiliated to MAKAUT with five out of six of its programmes being accredited by the National Board of Accreditation (NBA).

An Autonomous college carries a prestigious image for its students, the faculty members as well as the administration. Autonomy reflects the institute's efforts for distinction in academic performances, capability of self governance and enrichment in the quality of education. This prestigious status will also provide greater flexibility in introducing advanced course curriculum which is at par with the requirements of the industry.

The Examination Cell of the College is now responsible for smooth conduct of the Semester examinations, submission of assignments and other additional examinations. All matters involving the conduct of examinations, spot valuations, tabulations, preparation of Grade Card etc. come under the jurisdiction of the Office of the Controller of Examinations. The CGPA (Cumulative Grade Point average) grades that are tabulated by the Controller of Examination will be reviewed by the moderation committee, and the results will be declared on the college notice boards as well as on the website of the college, a copy of which will be sent to the MAKAUT too. Provisional degree certificates may be provided to students as per requirement basis upon obtaining permission from the University.

The final Degree Certificate (mutually devised by MCKVIE & MAKAUT) will be awarded to the students by the Parent University, MAKAUT, mentioning the name of the college. After the successful completion of three such academic sessions, we MCKVIE will have the honor of conferring the degree under our title with the seal of the University.

#### MCKV INSTITUTE OF ENGINEERING

# **MESSAGE**

#### From the CHAIRMAN'S Desk



Mr. Kishan Kumar Kejriwal

It gives me immense pleasure to welcome you on board and unravel to you a world of infinite possibilities. MCKV Institute of Engineering, with its Autonomous Status, AICTE Approval, NAAC Grade 'A' Accreditation, NBA Accredited Programmes and several other such prestigious collaborations, is sure to prove one of the foremost decisions of your life.

Our highly-qualified and dedicated faculty is focused towards making your learning process effective and memorable. With our State-of-the-Art infrastructure, modern laboratories, latest technology, and updated curriculum as per industry requirements, you will get hands-on experience of all that the corporate giants around the world pledge by. You will also have the rare opportunity to interact with professors of institutes of repute like IITs through online classes. We believe there is a explorer in all of us and to nurture that aspect in you, the Entrepreneurship Cell will provide constant support for your projects to get recognized and awarded. Our collaborations with renowned organizations like Volvo Eicher, Bosch, Tech Mahindra, TCS, Ericsson and many more, will give you an edge over others and you will be made industry-ready from day one.

The co-curricular activities including Annual Fests, Technical Fests, Inter-College Competitions, Rotaract Club, etc. will help you develop holistically. Amidst all, we must not forget that evolving as a wonderful human being is much more necessary than becoming a successful professional only. I would advise you to make optimum utilization of this enormous resource present here and realize your dreams come true. I commit that the coming years of your life at MCKV Institute of Engineering would be etched in gold deep down your memory lane. It gives me immense pleasure to welcome you on board and unravel to you a world of infinite possibilities.



# MESSAGE

#### From the **PRINCIPAL'S** Desk



#### Prof (Dr.) Abhijit Lahiri

From time immemorial 'the wheel of fire' at the center of our being has been turning impersonal and inflaming our indolent spirit that is otherwise bursting with creativity. The wheel and the fire are the greatest technological discoveries of early human beings. They are still important and relevant today, and their discoveries marked a distinct transition in early human history towards the eventual development of civilization. The wheel is used to transmit motion from one part to another in the field of engineering, and the fire is used to captivate energy. Without energy, nothing works. MCKVIE regularly upgrades its facilities to keep at par with modern and future technologies. Coupled with highly gualified and experienced faculty, MCKVIE has come to the forefront of the educational scenario in West Bengal.

Attaining harmony in multiplicity is a great and challenging task. In order to make an effective contribution to society at large, various knowledge domains have to be cross-fertilized to produce yet another neo-knowledge base.

To further enhance their lives out of only academic excellence, all students at MCKVIE are encouraged to become members of the Rotaract Club. In addition to this, they must also participate with one or more of six professional bodies designed to help students broaden their knowledge in their own field of work as well as gain networking skills with professionals in their domain.

Students are also encouraged to participate in various national and international competitions. They have won many awards and accolades from these events. We are proud that our students stand tall both in their knowledge and skills of application in today's challenging world.

Our training and placement cell continuously acts as an interface between the institute and industries to bring job opportunities for the students. This cell is administered by a team that works round the clock year-round to create placement facilities through oncampus, off-campus and pooled campus interviews for eligible students.

The college autonomy is instrumental for promoting broad base quality and excellence and is conferred on those colleges which have the potentiality. To survive in today's world, the mantra is of continuous professional development, evolution and up gradation.

I wish to thank our stake holders as well as honorary ambassadors, i.e., our alumni, for all their support in realizing our dreams at the institute. We welcome all students and learners to the MCKV Institute of Engineering and would like to give our best wishes to all aspiring engineers. I am hopeful that in the coming years, your time at our institute will prove to be the most fruitful and glorious part of your career.





University of Technology in 2003. The department has state-of-theart laboratories and qualified faculty members. The department offers a B. Tech degree with the approval of AICTE, and is affiliated to MAKAUT, WB.

The department has signed a MoU with Bosch India, VE Commercial Vehicles and Dassault Systems India with the drive to impart quality training as per the needs of the industry. Our students of automobile engineering are



#### Gear up for the future: Speed has no limit

The automobile industry is a fast moving sector that requires engineers conversant with the concept of product design, functional utility and integrated technology used in the manufacture of an automobile. We pioneered in establishing a full-fledged Degree Engineering Course in Automobiles in West Bengal under the West Bengal also encouraged to join professional societies viz. Society of Automotive Engineers (SAE) India and Rotaract Club. They also design and manufacture their own vehicles in order to take part in the National Level BAJA SAE India and Supra SAE India competition held every year in Pithampur, M.P. and Greater Noida respectively. Our students also participate in various competitions which includes Efficycle organized by SAE India.





#### **Key Concepts Covered**

- Automotive Engines
- Automotive Transmission
- Hybrid & Electric Vehicles
- Electronic Vehicle Management System
- Vehicle Dynamics
- Alternate Fuels and Energy Systems
- Automotive Body & Chassis Engineering
- Automotive Component & System Design





- Two and Three Wheelers
- Machine Learning
- Off-Road Vehicles
- Automotive Air Conditioning
- Noise, Vibrations and Harshness
- Finite Element Method & its Applications
- Internet of Things
- Soft Computing
- Robotics and Robot Application



### COMPUTER SCIENCE & ENGINEERING

networks, security, computer vision, pattern recognition, computer architecture, databases, theory of computation, language processors, graphics and multimedia as well as information retrieval. Emerging trends such as Cloud Computing, Machine Learning, Internet of Things, etc. are also included. State-of-the-art computing Lab facilities and dedicated faculty help perform research in various areas of computing. Student Chapters under Professional Bodies like Computer Society of India, give students the extra edge in terms of industry exposure.



#### Leaders in the next century will be those who empower others

Established in the year 1999, the Department of Computer Science and Engineering started its journey with a mission to provide the highest quality technical education and groom future leaders in India and abroad. The department, with its qualified and cohesive team of faculty members, emphasizes the broad vision of computation in different areas like algorithms, computer

#### **Key Concepts Covered**

- Knowledge of Algorithmic Analysis
- Concept of Object Oriented Programming
- Operating System
- Data Base Management Systems
- Computer architecture
- Computer Networks
- Artificial Intelligence & Machine Learning
- Cloud Computing
- Concept of Human Computer Interaction
- Cyber Law & Security
- Image Processing



### **NEW PROGRAMMES** Computer Science & Engineering (Data Science)

#### *The world is one big data problem.* -Andrew McAFee

#### Data is the new Science. Big data has the answers to the world problems.

The Department of CSE with Data Science specialization provides students with expertise in designing, developing, testing, and maintaining complex and large-scale database architectures and processing systems. This course will enable data science engineering students of our Institution to develop the skills of data extraction, manipulation, visualization, maintenance and a predictive ability from an efficient analysis of the data. The Department with its qualified and cohesive team of faculty members all with vast experiences in different related fields of computer science emphasizes the broad vision of computation in different areas like statistics, mathematics, programming, data base management as well as information retrieval. The students of this department are encouraged to become members of various professional organizations such as the Computer Society of India (CSI), Rotract Club etc. In order to promote advanced learning in science and engineering, emphasis and stress is given to entrepreneurial works and innovation in related fields of work.

In India and across the globe we are likely to encounter

tremendous demand for skilled talent in data science paving way for lucrative career opportunities for students in future. Data Science professionals can generate data to produce information that can offer business intelligence with predictive ability to facilitate fast business growth.

### The Curriculum includes concepts like:

- Knowledge of Algorithmic Analysis
- Concept of Data Mining & Data Analytics
- Big Data Analytics
- Data Base Management Systems
- I0T
- Artificial Intelligence & Machine Learning
- Cloud Computing
- Block Chain
- Cyber Law & Security
- Optimization & Game Theory

**MCKV INSTITUTE OF ENGINEERING** 







#### Technology needs Energy, Electrical Engineering creates it

Established in the year 2010, the Electrical Engineering department consists ofhighly qualified and experienced faculty, dedicated in shaping the future of aspiring students. The department is engaged in research in many emerging areas of Electrical Engineering, including Power Systems, Control Systems, Power Electronics, Electrical Drives, High Voltage Engineering, Signal Processing, Non-conventional Energy, Power Quality etc. The department is proud to have published high quality research papers in various reputed national and international journals like IEEE transactions, IET journals, ELSEVIER journals etc. Ourwell equipped state-of-the-art laboratories give them hands-on training, and the on-campus Student Chapter of IET (UK), Rotaract Club etc, open up prospects through networking and interacting with the industry.



#### **Key Concepts Covered**

- Working of Electrical Machines
- Transmission & Distribution Concepts of Electrical Power System
- Manage and Command of Control System
- Operation of Electronic Devices & Circuits
- Deal with Network Theory/Signals & Systems
- Concepts of Sensors & Transducer

- Understanding of High Voltage Engineering
- Concept of Electrical Drive
- Switch Gear & Protection in Electrical Devices
- Application of Power Electronics in DC Transmission
- Working of High Power Converters & Inverters
- Knowledge of CAD Electrical





### ELECTRONICS & COMMUNICATION ENGINEERING

Students publish their major projects as research papers in reputed journals and conferences. They have also received accolades and awards including first prizes at regular intervals from various national level project design competitions. Students of the ECE department are encouraged to become members of professional society's viz. IET (UK), Rotaract Club etc. Taking into consideration current progress in Electronics and Communication Engineering, we also introduced M.Tech degree course in Electronics and Communication Engineering in the year 2008.



### It's not that we just use technology, we live technology

Established in the year 1999, the Department of Electronics and Communication Engineering has a team of highly qualified and experienced faculty that regularly publish research work in National and International Journals, along with registering two US patents. The department providesa fully equipped R&D Laboratory, where aspiring engineers are encouraged to exhibit their expertise in creating both hardware and software based projects for in-house as well as other competitive fairs. The department is also the proud recipient of the MODROB fund, a feat it has achieved twice by modernizing its Communication Laboratory and VLSI Design and Embedded Systems Laboratory.

#### **Key Concepts Covered**

- Working of Digital Electronics
- Analog Electronics
- Understanding of Communication System
- Operation of Electronic Devices & Circuits
- Deal with Signals & Circuits
- · Concepts of VLSI
- Understanding of Power Electronics
- Computer Architecture
- · Control Systems
- Telecommunication Engineering
- Instrumentation Engineering
- Knowledge of CAD Electronics

### **NEW PROGRAMMES**



### Electronics & Communication (VLSI Design)

#### Chip Design can be art. Chip Design can be aesthetics. -Anonymous

MCKV Institute of Engineering (MCKVIE) is one of the leading futuristic engineering colleges in West Bengal offering new age B.Tech in Electronics and Communication course with VLSI Design specialization. Students, who are passionate about electronics engineering, can find themselves with niche career opportunities in this sector. The program will deal with the key aspects of hardware design and development for VLSI applications. The prime focus will be laid on the areas like VLSI system design, RF circuit design, ASIC design, FPGA based systems design and SOC based design and verification. These applications are more prevalent in areas like signal processing, image processing, networks and communication applications in the modern industries. The aspiring engineers studying this discipline at MCKVIE will be equipped for design and verification of electronics systems, circuits and its applications.

VLSI Design is recently one of the fastest growing sectors of engineering in India. While traditional Electronics Engineering disciplines deal with a broader aspect of different domains related to it, VLSI Design is hinged on the process of creating an IC by installing millions of transistors into a single chip

The students pursuing B-Tech in EC with VLSI Design specialization from MCKV Institute of Engineering will takeup innovative projects to enhance their knowledge and skills in this field. This course will enable VLSI students to address key social challenges in the areas from healthcare to climate change, from agriculture to satellite launching. Moreover, improved VLSI technologies will transform the dynamics of working across industries

The necessity of machine dependent society, trade and business owing to pandemic COVID-19 will lead to phenomenal demand of VLSI engineers in the near future. This shift in industries will open up lucrative career possibilities for VLSI Design engineers in the years to come. Emerging VLSI Design professionals can get lucrative and exciting placements in esteemed companies as application consultants, field application engineers and design engineers among many others.





continues to be a major pioneering branch of core engineering studies in the World. Over the years, it has strengthened itself with the study and use of latest technologies and innovation. The department has signed a MoU with Sigma Search Lights Pvt. Ltd., Kolkata, to impart quality training according to the needs of the industry. The collaboration



# Building strength and ingenuity for those that are driven

Established in the year 2008, the department has state-of-the-art laboratories and workshops. The faculty members of the department are both highly qualified and experienced, and regularly publish their research work in international and national journals of repute and attend seminars and conferences in India and across the globe.

Mechanical Engineering has been and

also assists in converting innovative ideas from the students into useful products for society. Our students take part in the National Level BAJA SAE India competition, Supra Racing competition and the GOKART competition (Chennai), every year. Students from this department are also encouraged to join and become members of professional societies viz. Institute of Engineers(India), Rotaract Club etc. Students are also provided with internship opportunities in reputed institutes like IISc Bangalore, the IITs, NITs, Jadavpur University, Anna University, CSIR-CMERI etc.





#### **Key Concepts Covered**

- Knowledge of 3D Printing
- Concept of Micro Machining
- Computational Fluid Dynamics
- Multiphase Fluid Flow
- Deal with Energy Transport
- Concepts of Renewable Energy





- Non Traditional Machining
- Concept of Electrical Drive
- CNC Machining
- Finite Element Analysis
- Optimization Techniques
- Robotics
- Mechatronics



#### INFORMATION TECHNOLOGY (NBA Accredited)

program caters to Information Technology students, bringing them all the relevant know-how necessary to become leading IT engineers of the future. The department has bagged various sponsored Consultancy and Research projects from prestigious organizations such as Internet Society (ISOC), Kolkata Chapter, Labcure Solutions Pvt. Ltd and GSSG Tech Solutions LLP. The department allied with the Institute holds anMoU with the Internet Society (ISOC) Kolkata Chapter, Webskitters Technology Solutions Pvt. Ltd and GSSG Tech Solutions LLP. This alliance was fostered to enhance motivation among the students regarding training and technical project development. Professional societies like IE(I), ISOC etc. have motivated student members from the department as well as various seminars and workshops, all of which are regularly held under the aegis of these societies.



### The best way to predict the future is to invent it

The term 'Information Technology' has now become synonymous with the current era. Established in the year 1999, the Department of Information Technology focuses on the latest applications from internet to intranet, core programming to web programming, along with the concepts of Data Analytics, Automation and Cyber Security aspects of the computing and web world. The faculty members, being dedicated, highly qualified and experienced are invested in active research alongside their students. The department is well equipped with computer laboratories that are furnished with state-of-the-art hardware and software platforms, including several open source software. Such software includes Linux, ICARUS, VERILOG, ARGOUML, JABUTI etc. Accommodation in these spacious laboratories can go up to even forty students at a time. The department's education

#### **Key Concepts Covered**

- Concepts of Information and Communication Technology (ICT)
- Computer Organization and Architecture
- Data Structurewith Design and Analysis of Algorithm
- Operating System Principles
- Database and Network Management Systems
- Web Designand Development
- Information Security
- Cloud Computing
- Internet of Things
- Artificial Intelligence
- Data Mining& Data Science
- Machine Learning
- · Compiler Design with the concepts of Automata Theory
- Business Software Development using C,C++,Java, PHP, Python etc.



### **NEW PROGRAMMES** Artificial Intelligence and Machine Learning

"Machine Intelligence is the last invention that humanity will ever need to make"

-Nick Bostrom

MCKV Institute of Engineering (MCKVIE) is one of the visionary Institutions in West Bengal introducing 4-years B.Tech in Artificial Intelligence and Machine Learning program under Information Technology Department (NBA Accredited) with advanced learning avenues imparting knowledge of innovations.

This specialization is designed to enable students to build intelligent machines, software or applications with a cutting-edge combination of machine learning, analytics and visualization technologies. The main goal of artificial intelligence (AI) and machine learning (ML) is to program computers to use example data or experience to solve real life problems. Many successful applications based on machine learning exist already, including systems that analyze past sales data to predict customer behavior, recognize faces or spoken speech, optimize robot behavior so that a task can be completed using minimum resources and extract knowledge from bioinformatics data etc.

#### This course is for individuals who...

This programme is for students who want to acquire the ability to design intelligent solutions to problems in a variety of domains & business applications, and fields such as natural language processing, text mining, robotics, reasoning and problem-solving etc.

#### The curriculum include concept like

- Artificial Intelligence
- Machine Learning
- Python Fundamentals
- Exploratory Data Analysis
- Inferential Statistics
- Supervised Learning
- Logistic Regression models
- Recommendation Engine
- Deep Learning- Tensor Flow, Keras
- Classification Algorithm
- Linear Regression
- Reinforcement Learning
- Time Series Analysis



## DEPARIMENTIS

### **BASIC SCIENCE**



### Basic Science is the other soil of all engineering

The department of Basic Science provides students with support in physics, chemistry and mathematics. These are the subjects which are considered the essential foundation for all branches of engineering. The faculty members regularly share their knowledge and engage with the students in order to satisfy their curiosity and provide them with a strong base in basic scientific knowledge and research.

The faculty of the Basic Science department are both qualified and well experienced, with many of them having successfully completed their Ph.D in the field. All the faculty members continue to be actively engaged in their research outside their teaching duties. To mark their research, they publish books, monographs and research articles in reputed international journals. More than seventy research articles from this department has been published in reputed international journals. Two of our students have obtained their Ph.D. Degree from Jadavpur University after successfully completing their research work in our Department of Basic Science.

The department is well equipped with two physics laboratories

alongside one laboratory dedicated to chemistry. The Department of Science and Technology (DST), Government of India, helped fund us in establishing a well-equipped polymer laboratory in 2002. Research scholars continue to work in the aforementioned laboratory even today.

Professor Debapriya De from the Department of Basic Science, received a grant on 22nd February, 2014, amounting to 56,69,400/- from the Department of Science and Technology (DST) towards the approval of a project titled, 'Mechanochemical De-Vulcanization of Vulcanized Rubber by Dual Function Disulfide Chemicals'. The research work is now finished and a well equipped polymer laboratory has been established where research scholars continue to work on and expand upon the topic.

Dr. Dipankar Ghosh, Assistant Professor, Department of Basic Science, is the co-investigator of the SERB (DST) sanctioned (16-May-2016) project titled, 'Nonlinear Pulse Dynamics in Dispersion Managed Optical Fibers Including Micro or Nano Dimensions (OFMN)'. Dr. Mousumi Basu from the Department of Basic Physics, IIEST, Shibpur, is the Principal Investigator of this three year project, with a total number amounting to 21.61 lakhs.



### DEPARIMENTS

### MANAGEMENT SCIENCES & HUMANITIES



## A smart person knows what to say, a wise person knows whether to say it or not

The Department of Management Sciences & Humanities endeavours to create a unique identity by not only catering to students' needs for enhancing linguistic skills and managerial acumen, but also by grooming them through Personality Development Sessions, Mock Interviews, Seminar Presentations and Group Discussions.

The teachers encourage progressive and analytical thinking, with an aim to enhance professional competence and promote relevant managerial skills. The Management wing familiarizes learners with the necessity of human values and importance of corporate ethics, besides helping them with the regular curricula, which are in tune with the demands of the Industry. The department pays individual attention to each student and ensures that they collectively are ready for the dynamic professional spheres. It also regularly organizes seminars and workshops that are conducted by professionals, academicians, and even the alumni. These make students aware of the needs of the job market.

The department boasts of a state-of-the art English Communication Laboratory with all the modern facilities. Currently, the department comprises of seven faculty members who are engaged in research and training activities.



### MBA IN BUSINESS ANALYTICS

However it is not easy for every nation or business house to effectively operate and achieve their success in today's global market. The need of today are visionary business leaders who possess adequate skills in allencompassing fields of analytical techniques, strategic planning, decision making and problem solving.

The faculty members of our post graduate degree are experienced and have decades of experience in industry both in India and



#### Introduction

The programme MBA in Business Analytics has been started with the belief that after an undergraduate degree in technical education it would comprehensively fulfill the needs of a quality post graduate degree in business education .This degree will enable specialized professional training of the new generation students so as to enable them to become competent business leaders for the next generation to come.

Globalization has made nations compete among themselves so that they can stand out in creating multi dimensional opportunities and utilize them to their advantage. India is not lagging behind in this competition and MCKVIE with its recent earned Autonomous status from UGC has an impactful role to play in this endeavor. abroad. The education that we provide gives emphasis on both academic course content developments as well as personality and soft skills that in turn pay rich dividends to the students in the recruitment process of leading companies. We make use of a methodology in our pedagogy where we make students ready to migrate to the next level of honor and pride. The learning and networking experience of these students will forever linger in their memory in the days to come.

The management of MCKVIE are committed to accomplish the task of not only enhancing the student's academic qualifications and career prospects but also in shaping their future growth and perception and enabling them to be the much awaited business leaders of tomorrow.

#### MCKV bistute of Engineering Estd.1999

#### **Core Values**

The business programme is guided by the following core values and the outcomes are expected as follows:

- 1. Intellectual Excellence: Creation and dissemination of knowledge through contributions to business practice, learning and pedagogical research
- 2. Community: Collaborative partnership between our internal and external stakeholders so as to promote research, service and community engagement
- 3. Diversity: Embrace the diversity of individuals and ideas so as to work as a successful and effective team
- 4. Integrity: Awareness of professional, ethical and responsible social behavior so as to promote and continuously improve our academic programme and imbibe transparency in our fiscal and operational proceedings.

#### The Curriculum includes concepts like:

- Artificial Intelligence
- DBMS & SQL
- Business Statistics for Analytics
- Business Research Methods
- Management Information System (ERP)
- •I0T
- Data Visualization using Business Intelligence
- Cyber Security
- Business Law
- Entrepreneurship
- Data Analytics





### MASTER OF COMPUTER APPLICATIONS

(MCA admission under lateral entry scheme)



#### **Technology creates more**

Established in the year 2008, this department aims to provide an excellent learning advantage to all students. The department has qualified and experienced faculty members who continue to actively publish their research work in various journals and present the same at conferences.

The department emphasizes research and development activities. It is not only the members of the faculty but also the students that have made several contributions in both national and international conferences, seminars and journals. The students from our MCA department proactively carry out various live projects and enter the industry through campus and off-campus interviews. The department also encourages projects based on open source standard tools and frameworks as per the current industry requirements. Some faculty members of the MCA Department are involved wit premier Institutes/Universities. They are resource persons involved in the training and implementation of MOOCs and LMS (Learning Management System).Our department also conducts regular workshops on New Technologies like Data Mining, the Internet of Things, Android Application Development and others to keep undated on all contemporary field knowledge and enhance the knowledge base of all participants.

Students are encouraged to do work on innovative projects such as IoT and Data Mining with open source technology/ tools. Special Training and classes are offered on the latest technology platforms, which are conducted for the final semester project by specialized external training partners/ corporate trainers. This test is designed to enable students into becoming successful entrepreneurs. Many of our Alumni are well established as entrepreneurs and businesspersons. Most of our students are already in established positions in the corporate world. Students of this department are members of professional society's viz. CSI, Rotaract Club etc. Every year MCA Dept. organizes JECA Mock Tests for prospective MCA students. The department is now open for lateral entry only.







### EXTRA CURRICULAR ACTIVITIES

The students of MCKV Institute of Engineering come from all around the country and thus, bring a wide range of viewpoints and experiences. The students carryout various Extracurricular and Co-curricular activities within and outside the campus, so multidimensional learning among the students makes their life opulent, energetic and alluring. Within the campus, students get involved in different activities to develop and demonstrate various skills and interests, and this helps them to groom themselves on various parameters. Various cultural activities organized by our students such as 'BALAKA', Fresher's Welcome Function: 'UTOPIA', the annual cultural fest, 'PRAGATI', the tech fest as well as 'ASCENT', the farewell function add to the multifaceted type of cultural bonhomie in our college. Apart from this Debate competition amongst all the engineering branches of the college and Design challenge competition organized by the Automobile and Mechanical Engineering Department in where the students manufacture prototypes of road vehicles, racing cars add to the flair of the intellectual culture that this college endorses.

In MCKVIE, not only students opt for different courses of Mechanical Engineering, Automobile Engineering, Computer Science Engineering, Electrical Engineering, Electronics Communications Engineering, etc., but they also evolve as new groomed personalities through these multifarious activities.







### DEVELOPMENT & GROWTH

Teaching and research are symbiotically connected in our College and therefore cannot be separated. It is a proven fact that leading universities/Institutes in the world which excel in research also excel in teaching programmes. Research in engineering and technology is not only vital to the quality of education; it is the bedrock of innovative technology and thus has implications to our country's economic growth as well. In order to stimulate this culture the Students' Chapter of Society of Automotive Engineers (SAE), Computer Society of India (CSI), The Institution of Engineering and Technology (IET), the UK-







based prestigious Institute of Engineers IE(I), Internet Society (ISOC) and the Indian Society of Heating, Refrigerating and Conditioning Engineers (ISHRAE), in which many students become members for their advancement of self-confidence, new technical skills and leadership qualities.

### CO-CURRICULAR ACTIVITIES

The Institute always encourages and supports different kinds of Co-curricular activities among its students as it understands the importance of it in day to day life. The Institutemakes annual arrangements for an Intra College "Technical Fair Cum Competition" called 'TECHNOTICA'. This event provides students with ample opportunities to exhibit their talents in technical areas as well as to test their leadership skills. Out of all the projects displayed the top five receives both cash prizes and certificate of recognition at the event. These projects are then further exhibited at the National Competition organized by the Birla Industrial and Technological Museum, Kolkata.

In addition the Institute organizes an Annual Robotics Competition known as "VAHAAN" amongst the neighboring colleges in the Howrah District. Our students also organize annual sports and games events (both indoors and outdoors) each year to assess their skills and talents in athletics. Students are also encouraged to further participate in other inter collegiate competitions like sports, quizzes, debates etc. and bring back accolades and awards from various competitions each year.



#### **Student Chapters**

- 1. Society of Automotive Engineers (SAE)
- 2. Computer Society of India (CSI)
- 3. Institution of Engineering and Technology (IET) (UK)
- 4. The Institution of Engineers (India)
- 5. Internet Society (ISOC)

#### Clubs

- 1. Rotaract Club
- 2. Innovation Club/Cell
- 3. Photography Club
- 4. YASTIKA The Tech Club of MCKVIE





### ROTARACT CLUB OF MCKVIE

In order to instill compassion of service towards the society, our students get ample opportunity to serve the underprivileged during their off time. This gives the students a chance to work with people in a creative and constructive way, leading to their personality development among other benefits. Students are exhilarated to visit Old Age Homes, Cancer Hospitals where they work with children, orphanages and make necessaryarrangements to donate equipments, like computers etc. The students also love to celebrate Rakhi festival at orphanages, enjoy Diwali by distributing crackers and sweets, and organize sporting events and games for the children.

Our students further conduct several awareness programs, such as the 'No Headphones While Driving' campaign, the 'Safe Drive, Safe Life' campaign, the 'Adult Education and Literacy' awareness movement as well as 'Women Empowerment' awareness drives among others. Our College Chapter (Club) is one of the biggest membership Rotaract clubs in the world.

#### SWAMI VIVEKANANDA CENTRE FOR POSITIVE THINKING



The Centre is amongst the first five in India and organizes various seminars, lecture meets, youth programmes and more at regular intervals. Our Centre is dedicated towards orienting students, faculty and staff members of the Institute through this teaching, life-giving thoughts and philosophy of Swami Vivekananda. Through regular meditation and value education classes and with a library collection of over 1600 books on spirituality and values as preached by Ramakrishna, Vivekananda and Sarada Devi, the Centre attempts to instill the values of these eminent thinkers in students. The Centre also conducts various outreach programmes and distributes clothes and other useful articles to the under-privileged children in our society through orphanages and other societal improvement drives.



### **STUDENT** AMENITIES

The Institute is abode to a moderately spacious common room, built to encourage recreational activities among the students. Here, students play and practice indoor games during their leisure time. The Institute boasts of both a basketball and shuttle courts where students can engage themselves and relax. They also have a spacious Cafeteria at their disposal that serves tea, snacks and good quality food at moderate prices.

The Institute also has its own multi-purpose gym facilities inside the campus for both male and female students. Mr. Mihir Bhattacharjee, a renowned National Level Coach, is an instructor in our gym and teaches yoga to the students as well. We also have our own cricket team that regularly practices on the grounds of the Bagan Athletic Club. Our College basketball team practices in the Institute's own court, under the supervision of National Level Coach Mr. Biplab Ghosh. The Multi-Gym as well as our Meditation Centre helps students to ease stress and curb anxiety.



#### **INFRASTRUCTURE** & FACILITIES

- Wi-Fi Campus
- Hostels for Girls and Boys
- Remote Class Room
- Digital Central Library
- Innovation & Entrepreneurship Cell
- Cafeteria, Multi-Gym & Meditation Hall
- Scholarships provided to economically poor and meritorious students
- NPTEL Lab
- Dedicated full time Students' Counsellor for their mental well being



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### **STUDENT** PLACEMENT

The Training & Placement Cell (T & P Cell) is administered by a team of dedicated personnel who work round the year in order to assist students in their training and placements. The Placement Wing connects prospective recruiters and arranges recruitment drives in accordance with market trends pertaining to entry level requirements in the country. The T & P Cell has been successful in maintaining high quality placement statistics over the years and the fact that our students bear the recession blues with record breaking placements itself is a testimony to our quality



### **PLACEMENT PREPARATIONS**

- The T & P Cell (Training & Placement) strives to maintain a symbiotic, vibrant and purposeful relationship with various industries and corporate. By facilitating the best possible match between the aspirants or recruiting organizations and our students, we maximize the placement potential for our students and create a win-win situation for all stakeholders.
- The T & P Cell (Training & Placement) helps students improve their employability skill-set in order to face campus interviews confidently and meet corporate expectations easily. The T & P Cell (Training & Placement) offers both internal and external training for the students.
- The Placement Cell organizes career guidance programmes for all the students from the very beginning. The Cell arranges training programmes like Mock Interviews, Group Discussions, Communication Skills Workshop etc and it also assists in Public Sector Exam Training for students who are interested to join Government Sectors.

QUALIFICATION



CAREER GOAL RESIME

### GROOMING

The T & P Cell (Training & Placement), together with Academic Training gears towards holistic grooming of our students so that they can face and overcome the challenges in today's competitive entry level job market.

The efforts include:

- Soft skill and aptitude development
- Industrial visits to industries to better understand the professional working environment
- Proper grooming and soft skills training can make a huge difference for any candidate and improve their chances of becoming successful in professional fields
- The T & P Cell (Training & Placement) endeavors to groom students with skills, inspire creative and innovative thinking to find solutions to real world problems and prepare them to face an industry that is increasingly demanding industry-ready engineers





#### SUMMER TRAINING

The T & P Cell (Training & Placement) has provisions to assist students in their Summer Internship and

Training Programmes. The Cell organizes vocational training during their vacations at different industries and corporate houses to increase awareness on the working ambience they will face after graduating. Mandatory internships for MCA students are also arranged by the Cell. The T & P Cell (Training & Placement) provides training in various sectors and major organizations.

### ALUMNI

The Institute provides an opportunity for the past to amalgamate for a while with the present and provide greater opportunities for the college to attain grander heights as the experience of the past helps guide the untapped potential of today .The Institute promotes and encourages the Alumni to exchange professional knowledge by organizing conferences, seminars, lectures and meetings amongst alumni, students, faculty and others. They deliver lectures with the intention of sharing their knowledge and experience with the students and faculty, bringing their attention to the recent trends within the industry. They further participate in the Annual Alumni Meet, an event in where they interact with the faculty and Institute authorities in order to provide ideas and suggestions aimed at improving teaching methodologies. Their advice goes a long way in training and building not just engineers, but future leaders. The Alumni Association makes earnest attempts to strengthen the bonds between the Alumni and the Institution.

### GENERAL GUIDANCE FOR STUDENTS

- College Timing: 9:30 AM to 5 PM
- College Working Days: Monday to Friday
- It is compulsory to appear and sit for both class tests as well as surprise tests
- It is mandatory for all students to wear their college ID cards and uniforms inside the campus at all times
- Students are required to pay their fees within the stipulated time
- Students are not allowed to use their cell phones during classes, in the laboratories as well as in the library
- Students must attend both their theoretical and practical

classes, submit their class/home assignment as well as lab reports

- Students must maintain complete silence during their theory and laboratory classes, and should not be found unnecessarily wandering around the corridors or the campus
- Guardian-Teacher Interaction Meetings are held to share mutual experiences regarding broader academic issues as well as the student's overall performance
- Students must not write anything or paste any posters on the walls of college buildings, including the boundary walls of the Institution

### **SAY 'NO' TO RAGGING**



As per the West Bengal Prohibition of Ragging in Educational Institution Act XIII of 2000, it is hereby enacted as follows:

Prohibition of ragging: (1) Ragging within an educational institution is hereby prohibited.

(2) No person shall participate in, abet, or propagate, ragging in any educational institution.

Explanation: For the purposes of this section, educational institution shall include –

(a) The premises or the campus of the educational institution, or

(b) The hall, that is to say, the unit of residence of students maintained by the educational institution, if any, or

(c) The hostel, that is to say, the unit of residence for students, if any, not maintained by the educational institution but recognized under any law for the time being in force. Penalty for ragging: Whoever contravenes the provisions of section 3 shall be punished with imprisonment of either description for a term which may extend to two years, or with fine which may extend to five thousand rupees, or with both.

**Dismissal of student on conviction and bar to admission or readmission:** If any student is convicted of an offence punishable under section 4, he shall be dismissed from the educational institution in which he has been prosecuting his studies for the time being, and shall not be re-admitted to that educational institution.

**Expulsion of student:** Without prejudice to the foregoing provisions of this Act, where a student complains of ragging by any other student to the head of the educational institution or to any other person responsible for the management of the educational institution, such head of the educational institution or person responsible for the management of the educational institution shall forthwith inquire into the complaint and if, on such enquiry, the complaint is found to be true, he shall expel the student, who has committed the offence, from the educational institution.

### AS PER THE SUPREME COURT VERDICT

Ragging is a criminal offence and hence the ragging offenders are stamped as criminals to be treated by the Police and the Court of Law on par with any other criminal under the Indian Penal Code.

Whenever there is any attempt of ragging on one or other fresher's, one should immediately contact the Principal or the Registrar without delay, one's Mentor, any member of the anti-ragging squads and, if one is a hostel boarder, hostel care-taker should be the first contact person.







#### **M.C. KEJRIWAL VIDYAPEETH**

Boys' School Affiliated to CISCE New Delhi Liluah, Howrah (West Bengal) www.mckv.edu.in



#### MADHUSTHALI INSTITUTE OF PARAMEDICAL SCIENCES

A Govt. Approved Co-Ed. College for Paramedical Science & Technologies Madhupur, Deoghar (Jharkhand) www.mips-india.in



#### **MADHUSTHALI VIDYAPEETH**

A Co-Ed English Medium Residential cum Day School Affiliated to CISCE, New Delhi Madhupur, Deoghar (Jharkhand) www.madhusthali.edu.in



NABL accredited diagnostic centre Liluah, Howrah(West Bengal) www.mckvhealth.com



#### MADHUSTHALI INSTITUTE OF TEACHER TRAINING

A Co-Ed Composite College for B.Ed, D.El.Ed and BLIS courses Madhupur, Deoghar(Jharkhand) www.mitt.in



RCB BAL VIKASH KENDRA Providing special education & other therapeutic services to differently abled children Liluah,Howrah (West Bengal)



#### **MCKV INSTITUTE OF ENGINEERING**

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