

MCT

Information Brouchure



MATHA COLLEGE OF TECHNOLOGY

APPROVED BY AICTE, AFFILIATED TO M.G. UNIVERSITY, RECOGNISED BY GOVT.OF KERALA

AN ISO CERTIFIED INSTITUTION

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VISION & MISSION

Our vision is to mould global quality engineers, having international standards and status. One has to learn not only from class room but also from the people around, the games they play, the culture they represent, the practical realities of life and the environment of studies. In MCT, we are a bit blessed to provide the best, better than anywhere else.

RECOGNITION AND AFFILIATION

MCT is recognised by Government of Kerala, Approved by AICTE-All India Council for Technical Education and Affiliated to M.G. University

QUALITY POLICY

We offer industry oriented high demanding new generation courses, with exposure to the enchanting world of new technologies. Apart from mere education, we are moulding professionals to face the challenges in the future world with commitment and by providing consistent good education. We focus on quality Engineering Education by inducing positive attitude, technical competence with quality Management Systems.

MESSAGE FROM DIRECTOR



Our focus is in nurturing a competent professional and getting placed in a top firm. MCT is working hard to maintain internationally recognised standards of competence and commitment for the engineering and other professional education with your co-operation, to mould you as an equipped professional. MCTians are always at an edge with their counterparts owing to the well-researched curriculum implementation and we provide extra curricular activities that lead to mould a successful professional as well as personal development. along with placement assistance and best results in the university examinations.

Teaching at MCT is highly practical and focused on what the industry needs as it is evolved through constant interaction with leading professionals who are a part of the Industry and Academic Advisory Boards. Besides imparting theoretical knowledge, the curriculum stresses on developing analytical skills, communication, problem solving and team work abilities. Hence, case studies, industry projects, presentations, research work and role-play form an integral part of a student's tenure at MCT. At MCT, emphasis is given on not only making you academically brilliant, but true leaders and team players, thus preparing you for the real life corporate world. To help you in personal grooming, special sessions are held on business etiquettes, negotiation skills and effective communication. MCT believes in not just developing achievement oriented skills but also inculcate humane values in students. So with no compromises, join MCT and build your career.



MCT ENGINEERING COLLEGE

APPROVED BY AICTE, AFFILIATED TO M.G. UNIVERSITY, RECOGNISED BY GOVT. OF KERALA



ABOUT THE COLLEGE

Matha College of Technology - The pioneer educational institution among the leading professional colleges in Kerala. We started our voyage towards academic excellence in the year 2003. The roots of the Institution lie in the expertise of the educationalist under the excellent command of honorable Chairman Dr. P.R Radhakrishnan, who is having experience in this field for the past two decades.

PRINCIPAL

Dr. N. Premachandran

- Graduated from Kerala University in Chemical Engineering.
- Post Graduation in Chemical Engineering from Indian Institute of Science, Bangalore.
- Doctorate from I.I.T., Madras in the field of 'Polymeric Composites'. More than 32 years of experience in Teaching, Research & Administration, of which 6 ½ years has been in the rank of Principal, under Dept. of Technical Education, Govt. of Kerala
- Served as Principal, Govt. College of Engg., Kannur (2 Years), Joint Director, Industry-Institute Interaction Cell, Kalamassery (One Year) and Principal, Govt. Engg. College, Thrissur (3 ½ years).

B.Tech COURSES OFFERED



- **CE** Civil Engg.* (60 Seats).
- **ME** Mechanical Engg.* (60 Seats).
- **AU** Automobile Engg. (60 Seats).
- **IT** Information Technology (60 Seats).
- **CSE** Computer Science & Engg. (90 Seats).
- **ECE** Electronics & Communication Engg. (90 Seats).

ELIGIBILITY

First Year (Management Quota)

- 50 % for maths & 50 % aggregate for Maths, Physics and Chemistry/ Computer Science in 10+2 / HSC / CBSE / VHSC or equivalent.
- 45% for maths and 45 % aggregate for Maths, Physics and Chemistry/ Computer Science for SEBC [EZ, MU, LC, BX, BH]. Just pass for SC/ ST.

Note: Must have attended CEE exam for General Merit and for **NRI** seats, no need of entrance examination.

Lateral Entry (Direct Second Year)

- 60 % for Diploma. (LBS Lateral Entry Test Rank).



Admission Criteria : On Merit
Duration : 4 years/ 8 Semesters
Examination : M.G. University

Job Assurance

Placement training is given during the course and 100% effort will be made to place every successful candidate

Facilities

Best Internet-Digital library, modern labs, best library, expert faculty, fine discipline, facilities for sports, arts, gymnasium, yoga, placement training. Excellent workshops and provide institute-industry interaction.



Fees Waiver Scheme

Tuition fee waiver shall be given to two woman candidates, three economically weaker students (Annual income of Parents/Guardians should be less than Rs. 2.50 lakhs from all sources) and one physically handicapped student based on their merit from each branch of 60 students.

HOW TO APPLY

Complete the Application for admission available with the prospectus, with all annexure as mentioned in the form and submit it to the office of MCT. The application form can be downloaded from the website (www.mathacollegeoftechnology.edu.in) and shall be sent to the college office.

Semester Tuition Fees & Other Fees

Tuition fees for each semester should be paid on or before the commencement of each semester. Fine as stipulated by Principal / management should be paid by the defaulters of tuition fee for each semester.



Civil Engineering deals with the design and construction of Buildings, Bridges, and Roads etc. It also includes study of transportation, environment. Soil investigation, building materials. Water supplies, sanitation etc.



Civil Engineering is an age-old profession and has been defined traditionally as “a great art, on which the wealth and the well-being of the whole of society depends. Its essential feature, as distinct from science and the arts, is the exercise of imagination to fashion the products processes and people needed to create a sustainable physical and natural environment. It requires a broad understanding of scientific principles, knowledge of materials and the art of analysis and synthesis. It also requires research team work, leadership and business skills.” A Civil Engineer is someone who practices all or part of this art. Our old monuments and structures speak a lot about practical development of Civil Engineering in this country

Until modern times there was no clear distinction between civil engineering and architecture, and the term engineer and architect were mainly geographical variations referring to the same person, often used interchangeably little more than a social society.

Civil engineering is a professional engineering discipline that deals with the design, construction and maintenance of bridges, roads, canals, dams and buildings in an eco friendly environment. Civil engineering is the oldest engineering discipline after military engineering, and it was defined to distinguish non-military engineering from military engineering It is traditionally broken into several sub-disciplines including environmental engineering, geotechnical engineering, structural engineering, transportation engineering, municipal or urban engineering, water resources engineering, materials engineering, coastal engineering, surveying, and construction engineering. Civil engineering takes place on all levels: in the public sector from municipal through to federal levels, and in the private sector from individual homeowners through to international companies.

Civil engineering is the application of physical and scientific principles, and its history is intricately linked to advances in understanding of physics and mathematics throughout history. Because civil engineering is a wide ranging profession, including several separate specialized sub-disciplines, its history is linked to knowledge of structures, materials science, geography, geology, soils, hydrology, environment, mechanics and other fields.

Throughout ancient and medieval history most architectural design and construction was carried out by artisans, such as stone masons and carpenters, rising to the role of master builder. Structures, roads and infrastructure that existed were repetitive, and increases in scale were incremental

Study and Design of machines, Engines, Refrigerators, Air condition Systems. Turbines, Mechanisms.



Mechanical Engineering is an engineering discipline that involves the application of principles of physics for analysis, design, manufacturing, and maintenance of mechanical systems. Mechanical engineering is one of the oldest and broadest engineering disciplines.

Mechanical engineers design and build engines and power plants and vehicles of all sizes. It requires a solid understanding of core concepts including mechanics, kinematics, thermodynamics, fluid mechanics, and energy. Mechanical engineers use the core principles as well as other knowledge in the field to design and analyze motor vehicles, aircraft, heating and cooling systems, watercraft, manufacturing plants, industrial equipment and machinery, robotics, medical devices and more...and moving mechanisms, machines, and robots.

Applications of mechanical engineering are found in the records of many ancient and medieval societies throughout the globe

The field of mechanical engineering is considered among the broadest of engineering disciplines. The work of mechanical engineering ranges from the ocean bottoms to space.

Mechanical Engineering the basic and master of all Engineering

The rapid advancement in various other branches of Engineering have enabled strides in telecommunication technology. Electronics is virtually the prime control of every technological activity today. In addition to telecommunication and Electronic subjects, they are imparted sufficient knowledge in the fields of computers.

It may be hard to imagine today, but at the beginning of the 20th century, the Wright Brothers were just getting their “flying machine” off the ground, the telephone was still a novelty, and the first crude computer was still thirty years from invention. As we begin the 21st century, the rapid transmission of data has become indispensable to many consumers and businesses, which consider innovations such as communications satellites, wireless phones and computer networks staples of everyday life.



One example of this is the increasing use of broadband applications and service among consumers. According to the June 2002 edition of Communications Engineering and Design magazine, the estimated need for residential broadband access will jump 400 percent from 2007 to 2020. Demand for these modern communication devices has created a need for skilled employees who can help design, develop, install, test and maintain them.

According to the Bureau of Labor Statistics, eight of the ten fastest growing occupations from 2008 - 2020 will be in fields of technology. The Electronics and Communications Engineering Technology program of study at the College emphasizes technical skills that can be used to help design, develop, install, test and maintain communications systems. Graduates of this program may begin to pursue career opportunities in a variety of entry-level positions, such as electronics engineering technologist, electronics engineering assistant, engineering sales/service representative, computer systems technologist, technical consultant, telecommunications technician, communication systems installer, field service representative, engineering technician or research technician. Among the types of work environments that may use the services of graduates with these skills include, among others, data and telecommunications service providers, TV and satellite services organizations, computer network sales and services organizations, electronic systems R&D facilities and entertainment industries. The scope of this course is having an unending potential.



Students are taught basic hardware aspects of computers, basic languages, operating systems, programming etc. In addition to intensive exposure to hardware and software aspects. They are taught design and manufacturing aspects of computers, as well as aspects of development of system software.



Computer science is the study of the theoretical foundations of information and computation, and of practical techniques for their implementation and application in computer systems. It is frequently described as the systematic study of algorithmic processes that describe and transform information; the fundamental question underlying computer science is, "What can be (efficiently) automated? Computer science has many sub-fields; some, such as computer graphics, emphasize the computation of specific results, while others, such as computational complexity theory, study the properties of computational problems. Still others focus on the challenges in implementing computations. For example, programming language theory studies approaches to describing computations, while computer programming applies specific programming languages to solve specific computational problems, and human-computer interaction focuses on the challenges in making computers and computations useful, usable, and universally accessible to people.

The general public sometimes confuses computer science with vocational areas that deal with computers (such as information technology), or think that it relates to their own experience of computers, which typically involves activities such as gaming, web-browsing, and word-processing. However, the focus of computer science is more on understanding the properties of the programs used to implement software such as games and web-browsers, and using that understanding to create new programs or improve existing ones

The early foundations of what would become computer science predate the invention of the modern digital computer. Machines for calculating fixed numerical tasks, such as the abacus, have existed since antiquity. Wilhelm Schickard built the first mechanical calculator in 1623. Charles Babbage designed a difference engine in Victorian times helped by Ada Lovelace. Around 1900, punch-card machines were introduced. However, all of these machines were constrained to perform a single task, or at best some subset of all possible tasks.

During the 1940s, as newer and more powerful computing machines were developed, the term computer came to refer to the machines rather than their human predecessors. As it became clear that computers could be used for more than just mathematical calculations, the field of computer science broadened to study computation in general. Computer science began to be established as a distinct academic discipline in the 1960s, with the creation of the first computer science departments and degree programs. Since practical computers became available, many applications of computing have become distinct areas of study in their own right.

In this course the students are taught basic hardware aspects of the computer, basic languages, operating systems, programming etc. They are exposed to the development of operating systems and also get exposed to various application aspects of computers. Programmes are usually structure around a core of technology oriented speciality courses, with emphasis on applying computer technology to solve business problems. Develops the specific range of computing, IT skills and competencies necessary for you to be immediately effective in industry and commerce.

Information technology (IT), as defined by the Information Technology Association of America (ITAA), is "the study, design, development, implementation, support or management of computer-based information systems, particularly software applications and computer hardware. IT deals with the use of electronic computers and computer software to convert, store, protect, process, transmit, and securely retrieve information.



When computer and communications technologies are combined, the result is information technology, or "infotech". Information Technology (IT) is a general term that describes any technology that helps to produce, manipulate, store, communicate, and/or disseminate information. Presumably, when speaking of Information Technology (IT) as a whole, it is noted that the use of computers and information are associated. networks and information databases. A few of the duties that IT professionals perform .

So decide to select a career in IT, and explore the immense potentials.

Today, the term information technology has ballooned to encompass many aspects of computing and technology, and the term has become very recognizable. The information technology umbrella can be quite large, covering many fields. IT professionals perform a variety of duties that range from installing applications to designing complex computer may include data management, networking, engineering computer hardware, database and software design, as well as the management and administration of entire systems.



The most developing field of engineering world wide, gives ample potential for a great and demanding career. The department train students in all aspects of Automobile Engineering like servicing, maintenance, sales management, computer aided business, auto electricity, manufacturing methods, faults identification and rectification and so forth. The candidates are trained, also in various mechanical engineering trades, to become production oriented.



An **automobile** is a wheeled vehicle that carries its own motive power for propulsion. Different types of automobiles include cars, buses, trucks, vans, and motorcycles, with cars being the most popular. The term is derived from Greek 'autos' (*self*) and Latin 'movére' (*move*), referring to the fact that it 'moves by itself'. Earlier terms for automobile include 'horseless carriage'] and 'motor car'. An automobile has seats for the driver and, almost without exception, one or more passengers. To day It is the main source of transportation across ithe world.

The modern automobile powered by the Otto gasoline engine was invented in Germany by Carl Benz. Even though Carl Benz is credited with the invention of the modern automobile several other German engineers work on building the first automobile at the same time. The inventors are: Carl Benz on July 3, 1886 in Mannheim, Gottlieb Daimler and Wilhelm Maybach in Stuttgart ,also inventors of the first motor bike) and in 1888/89 Germany|German-Austrian inventor Siegfried Marcus,Vienna Steam-powered self-propelled cars were devised in the late 18th century.In 1807 François Isaac de Rivaz designed the first internal combustion engine (sometimes abbreviated "ICE" todayThis spawned the birth of a number of designs based on the internal combustion engine. In 1860 thereafter, Jean Joseph Etienne Lenoir built the first successful two-stroke gas driven engine. In 1862 he again built an experimental vehicle driven by his gas-engine, which ran at a speed of 3 km/h. These cars became popular and by 1865 could be frequently seen on the roads.

The large scale, production-line manufacturing of affordable automobiles was debuted by Oldsmobilein 1902, then greatly expanded by Henry Ford in the 1910s





LIBRARY & READING ROOM

Furnished with variety of Text books, related Engineering Books, Dictionaries, Encyclopedias and other General knowledge Books. A separate Reading Room with dozens of national and international journals, newspapers, Magazines etc. are provided.

HOSTEL

Hostels for boys and girls with all amenities have been provided inside the college campus.

CANTEEN

Canteen with most modern facilities provide vegetarian & Non vegetarian food. Food committee assure the quality & hygiene of the canteen.

MULTI GYM

Gymnasium with most modern equipments like Treadmill, Orbitrack, Abking Pro, Four Station Multi Gym, Doumbells & Weights, and Bench Press etc. PD attends to the needs of the training aspects of the gymnasium.

INTERNET LAB

The college has an excellent computer centre with high speed internet facility.



LABORATORIES & WORK SHOPS

'MCT' provide state of the art facilities in workshop & labs to enable the student to become a Qualified Engineer of International Quality. Well equipped workshops in Smithy, Moulding, Forging, Carpentry, foundry, Gas welding, Arc welding pattern making painting etc. is part of our Mechanical Engineering Section. Masonry, painting, Surveying and so forth in the Civil Engineering section. Surveying includes chain, Compass, Plane Table, Leveling, Theodolite etc. Electronic Circuit design, wiring, using sophisticated electrical and electronic equipments for electrical engineering section. Computer and information technology lab is equipped with latest computer, printers, scanners with facilities for internet, animation, multimedia etc. Electronics and communication lab, is equipped with latest equipment, measuring instruments, experimental boards, Oscilloscopes etc.

Automobile Engineering workshop has multi number IC engine, accessories of engines, chassis, auto electrical systems and so forth. They also have to work in different lathe, milling, drilling, boring and shaping machines.



FACULTY

Expert, well qualified, hard working, committed to the core and who know the nobility of the profession are absorbed in our teaching faculty and they are second to none in the Contemporary Institutions. All modern teaching aids like OHP, LCD Projectors, Slide Projectors and other computer aided systems are used as teaching aids, with the active involvement of an educational technology lab and a digital library. The college in association with major industries and research organisations of the state provide quality and practical oriented technical education. This provides greater avenues for students in updating the knowledge in Engineering, Science and Management subjects. The faculty is always there to support the student community in every sphere of their requirements.



EVALUATION SYSTEM

Continuous evaluation system is followed for assessing the students performance in addition to the semester examinations conducted by the M.G. University. Internal assessment marks are given based on attendance, class participation, assignments, workshop and lab work, conduct on campus, punctuality, utilization of library, reading room and computer lab, participation in sports games and other extra curricular activities

PTA

Parant Teacher Association is formed for the betterment of Academic and infrastructure development of the college.

PLACEMENTS- Generating Quality Man Power

We have offered 100% placement assistance to the previous Batch passed out candidates. They are placed in international companies like L & T Infotech, IBS, Siemens, Sonatta Software, Syntal, Dell, Omnex Auto, Windal Auto, Allsec Technologies, Fifth Generation Technologies and many other major industries at different levels. We conduct placement training programmes to create employable engineers ready to serve the industry by identifying their hidden strengths and capacities. They enhance their skills in Aptitude, Group discussion, Leadership, Communication, Trust building, Team effectiveness, Inter personal relations, Time Management and many other soft skills.

Placement Portal

The College has lauched a placement portal for the benefit of employers and students

Students can use this portal for presenting applications to the employers through the college placement office, participating in on-campus / off-campus recruitment drives of employers. Besides their opportunities, this portal has a knowledge center that includes a career guidance section, resume and interview preparation sections provided by the college for the benefit of students. New articles on these subjects are displayed on a regular basis. In addition, students have access to career counselors, online quizzes, tests and a national level job vacancy database.

EXTRA CURRICULAR ACTIVITIES

The extracurricular life on campus is managed by students themselves with the strong support and guidance of the college authorities through Arts club, sports club and students union. In addition, clubs for tourism, photography, music, debate and fine arts are also organized by students. Technical associations are also organized for different branches, through the activities of which industrial exposure and technical empowerment of the students are made possible.

Arts & Sports

Events like the Sports Day, College Day, Arts festival, etc are scheduled in the academic calendar. Such functions help to foster a spirit of unity & sportsmanship apart from providing a venue for the students to display their talents and hence to achieve mental & physical fitness.



BEST INNOVATIVE PRACTICES

- Uniforms, ID Card, full time internet access, Wifi Computer lab, Computer aided audio-visual system of Education, Digital library, Maximum national –International journals ,Magazines and news papers
- Total Ragging free Campus, Branch wise Clubs, Institutional organizational membership in Professional bodies as IE,IETE,IME,ISTE,EC(UK) etc for updating the knowledge through Journals, Membership, Symposiums,Seminars etc
- Open air Theater, Indoor Theater, Common Rooms, Indoor & Out door games, Play Grounds, Arts and Sports Competitions and Festivals, Conducting Exhibitions, Counseling Services.
- An expert Placement cell to ensure 100% Placement assistance, and to facilitate Placement Training, Interaction with Passed outs, Alumni, Also to arrange training by HRD, Personality development, Yoga, Spoken English, mock interview, Contacting Industrialists, giving training according to the requirement of Industry, Indian and Foreign recruitment assistance for higher education and employment
- ISO Certification for Systematic administration, Grade “A” Certification by Government of Kerala body to ensure quality and Standards .AICTE approval for integrated Campus to run Polytechnic, Management Studies, Additional Engineering Courses and Additional intake to prove the facilities.
- A Physical Education Department to impart and promote training in Physical Fitness, Psychological development, Gymnasium, Reiki, Arts of Living, Sports,
- Yoga, Picnic, Athletics, different sports, Adventures Sports, games etc.
- Individual Computer for each Student of management in the Class with wire free Internet LAN, Audio-visual facilities with LCD TVs and Projector
- The facilities of an Engineering College with full fledged labs of basic science for Polytechnic Diploma Students, facilitating the Students to get admission for B.Tech (Lateral Entry) as per AICTE and State Government norms and to Produce best diploma Engineers
- A full time digital Library to enhance the knowledge of international standards with membership in various libraries
- Identification of deficiencies of each student at the time of entry and providing additional input by way of extra classes and courses in soft-skill development
- Introduction of fees waiver Scheme to help Poor, Women and handicapped. Fees Concession to Lateral Entry Scheme to help poor Diploma holders with eligibility to enhance their qualification. And many more...
- Unique features include 5 minutes from Aluva- Paravur main road. 14 kms from Kochi International Airport. Transportation from all over Ernakulam and Thrissur districts.Boys and girls hostel, Classwise PTA meeting in every semester etc.



MCT

ENGINEERING COLLEGE

FEATURES OF MCT

- ◆ Separate Hostels for boys and girls.
- ◆ Canteen and mess with vegetarian & Non Vegetarian food.
- ◆ Play grounds, Open Air Theatre and Mini Auditorium for sports, games and cultural activities.
- ◆ Uniform is mandatory and all students will have to obtain identity cards.
- ◆ The class timing will be from 9.00 a.m. to 4.00 p.m. on all working days (Subject to modifications).
- ◆ Students are not permitted for any political activities.
- ◆ University regulations will be strictly enforced.
- ◆ Special classes, Seminars, Symposiums, Debate, Industrial visit, Educational Tour, Picnic, Personality Development Programs are conducted as per the Academic Calender, issued from the college.

IMPORTANT NOTE

Fees or any charges once, paid are neither refunded nor transferred, on any reason. Once admitted the candidates are liable to pay the entire course fee. After closing admission, if a person discontinues studies for any reason, he or she has to pay liquidated damages. TC and other certificates will not be issued, if anybody fail to comply with the above requirement. The legal jurisdiction will be Civil Court of Cochin.

