

## Dept. of Mechanical Engg

Mechanical Engineering is one of the major activities in the engineering profession and its principles are involved in the design, study, development and construction of nearly all of the physical devices and systems. Continued research and development have led to better machines and processes helping the mankind. Its impact on the Institute and on society is easily demonstrated by noting the alignment of the department's evolution with key events and technological advances in the India and elsewhere. Students have a variety of opportunities to investigate a broad range of research in about a dozen thrust areas. Some of the specific areas include Computer-Aided Design and Manufacturing, Rapid Prototyping, Robotics and Controls, Turbo machinery and Combustion Systems, IC Engines, Multi-Phase flow, Nano-mechanics, Tribology, Computational Fluid Dynamics and Acoustics. Mechanical Engineers have to study a whole lot of physics, Engineering drawing, machine drawing and many more concepts such as Statics, Dynamics, Kinematics, Strength of Materials, Materials Science, Theory of Machines, Thermodynamics, Fluid Mechanics, Heat Transfer, Manufacturing, Machine Design, Electrical Circuits, Laboratory Methods, Vibrations, Engineering Economics, Metallurgy, Manufacturing Process, Computer Aided Design/ Drafting (CAD)

## Aim of the Course

The aim of the Mechanical Engineering programme at KISTech is to provide broad-based education and training in mechanical engineering sciences and their applications that will enable graduates to meet the challenges of the engineering profession in a rapidly changing environment such as exists in a developing country like Ghana. These challenges require the ability to apply existing knowledge in new ways thereby creating new systems and opportunities as well as adapting existing technology to local production conditions. They require the ability to manage service, maintain and improve upon existing as well as new systems. The programmes and courses are therefore guided by these concepts.

## Career Prospects

It has a tremendous scope in automobile engineering, cement industry, steel, power sector, Hydraulics, Manufacturing plants, Drilling and mining Industry, Petroleum, Aeronautical, Biotechnology and many more. With its wide scope of application, mechanical engineers remain always in demand, no matter which part of the world. You can also find job very easily in the following public sector industries such as Indian Railways, Indian Air force (Technical), Indian Army, Thermal power corporations etc.

## Laboratories under Mechanical Department

- Basic Mechanical Lab
- Basic Mechanics Lab
- Strength of Material Lab
- Thermodynamics Lab
- Machine Drawing Hall
- Machine Lab
- Thermal Lab
- Fluid Mechanics Lab

## Gas Dynamics Lab Dept. of Civil Engineering

Civil Engineering involves planning, designing and executing structural works. The profession deals with a wide variety of engineering tasks including designing, supervision and construction activities of public works like roads, bridges, tunnels, buildings, airports, dams, water works, sewage systems, ports etc. and offers a multitude of challenging career opportunities.

A civil engineer is responsible for planning and designing a project, constructing the project to the required scale, and maintenance of the product. A civil engineer requires not only a high standard of engineering knowledge but also supervisory and administrative skills. The planning part of their work involves site investigation, feasibility studies, creating solutions to complications that may occur and the actual designing of structures. They have to work with the guidelines of the local government authority and get plans approved by the relevant authority. They may prepare cost estimates and set construction schedules. Construction work involves dealing with clients, architects, government officials, contactors and the supervision of work according to standards. Their work also involves the maintenance and repair of the project.

The major specializations within civil engineering are structural, water resources, environmental, construction, transportation, geo-technical engineering etc. On most projects, civil engineers work in teams or in coordination with many other engineers. They can find work as a supervisor of a construction site or a managerial position or in design, research as well as teaching in government services or private concerns. They can also work as independent consultants.

#### Aim of Course

The aim of Civil Engineering is to provide better facilities of life to the communities e.g Better water supply system, Sewerage system, traffic system etc, layout the physical features of the earth by Surveying and Leveling., safer designs of Canals, Dams, Barrages etc ., better network of roads and Highways and ensure comfortable traffic system , safe construction of buildings and other structures .and their repair and maintenance. Civil Engineering covers the subjective as well as practical knowledge of Transportation, Construction, Application of soft computing, Environmental engineering, Automation in construction Geographical positioning system ,Soil mechanics, Fluid mechanics, CFD. Geology, Surveying, Testing methodology, Disaster management, Resource and Infrastructure monitoring (Forest, Bridge, River, Dam, etc.), Intelligent building.

#### Career Prospects

Civil Engineers can find job in Government departments, private and public sector industries, research and teaching institutions etc. Job opportunities for civil engineers are expected to increase as fast as the average for all jobs, although the construction industry is vulnerable to fluctuations in the economy. Civil engineers will always be needed to maintain and repair existing facilities and structures and to construct new ones. After doing B.E one can look for jobs in road projects, building work, consultancy firms, quality testing laboratories or housing societies. The experts say there is a high demand for experienced civil engineers in developed countries. Civil engineers are employed in all the major construction projects carried out by the state or central government, the railways, private construction companies, military, [engineering services](#), consultancy services etc. Civil engineering graduates can also go in for research and take up teaching or they can open their own independent consultancy services.

#### Laboratories under Civil Department

Basic Civil Lab  
Geology Lab

Surveying Lab  
Material Testing Lab

Dept. Of computer Science & Engg,

The Dept. of Computer Science & Engg. Caters the most demanding professionals with cutting edge technology with its expertise faculty and fully equipped laboratories. The Department's mission is to advance, evolve and enhance computer science and computing engineering fundamentals to build the intellectual capital of our research and of our students.

The B.E. in CSE at KISTech is a broad and flexible degree program with the curriculum specifically designed to reflect the depth and breadth of Computer Science our endeavor is to make the CSE Department of our institute an important resource center for the development of computing and IT systems and applications. CSE department boasts a vibrant faculty. It has Database application lab, Algorithm lab, Web programming lab, Network lab, Computer Graphics & Visualization lab, System software and Compiler Design lab. This department focus to bring Advanced electronics, Advanced DBMS, Mobile computing, Rich internet applications, ARM based System design, Grid computing, Programming language projects in the undergraduate curriculum.

#### Aim of the Course

The aim of the program is to expose the students with latest technologies and applications. This course enables the student to understand the concepts of programming techniques and technologies involved in advancement of computer technology.

#### Career prospects

CSE effectively prepares students to pursue leadership, technical and management positions in a variety of industries. Students can be placed successfully in top notch companies as computer & software engineers.

#### Laboratories under Computer Science Department

Central Computer Centre

Language Lab

#### Software Lab Dept. of Electrical & Electronics Engg.

The field of Electrical & Electronics Engineering (EEE) is the place to be in for those who love electrical systems- ranging from heavy power generators to the smallest of micro-chips. This department infuses the design, manufacture, installation, operation and management of electrical systems that strengthen modern economies and contribute to improving the quality of life. The EEE department at KISTech prepares students in this field using new-age information and computer- intensive technologies.

The B.E (E.E.E.) degree program is designed to achieve a balance between depth of knowledge acquired through specialization and breadth of knowledge gained through exploration.

#### Aim of the Course

To create professional electrical and electronic engineers, who can serve in the fields of core electrical engineering, information and communication systems and other related fields.

#### Career Prospects.

Studying Electrical and Electronics Engineering will lead to potential careers in the power industry, Robotics, Process industry and Bio- engineering. Career opportunities are also found in the Telecommunication industry, Mining and Transport sector, Computer industry transmission industries and small innovative private specialists.

#### Laboratories under Electrical & Electronics Lab

Basic Electrical Lab

Instrumentation Lab

Electrical Workshop

#### Machine Lab Dept. of Electronics & Communication Engg.

Electronics & Communication Engineering (ECE) is a rapidly progressing field. With technology enveloping our everyday life, opportunities for electronic engineering are endless. The ECE Dept. at KISTech prepares students for careers in this constantly evolving discipline. The department offers B.E in ECE with full and flexible undergraduate curriculum. The Dept. of Electronics & Communication Engineering has proficient & skilled faculty to impart world class technological solutions to the students. The department accomplish with well equipped

laboratories like DSP lab, Analog Communication lab, LIC lab, Advanced Communication lab, Microprocessor lab, VLSI lab & Power Electronics lab. The department focuses to develop modular projects in Satellite Communications, Artificial Neural Network, Speech Processing, Micro & Smart systems Technology, Internet Engineering, Biomedical Signal Processing, Fuzzy Logic, GSM, Optical Networks, and Adhoc Wireless Networks etc.

#### Aim of The Course

The focus of the program is to inculcate the formal education and extensive practical applications in fundamental and advancements of Electronics & Communication engineering.

#### Career Prospects

Studying Electrical and Electronics Engineering will lead to potential careers in the Power industry, Robotics, Process industry and Bio-engineering. Career opportunities are also found in the Telecommunication industry, Mining and Transport sector, Computer industry, Transmission industries and small innovative private specialists.

#### Laboratories under Electronics Lab

Basic Electronics Lab

Electronics Device Lab

Network Lab

Digital electronics Lab

Analog Communication Lab