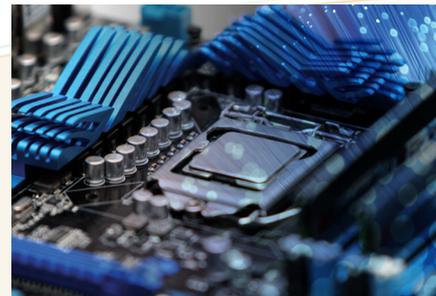




# THE TECHNICAL UNIVERSITY OF KENYA

«Education and training for the real world»

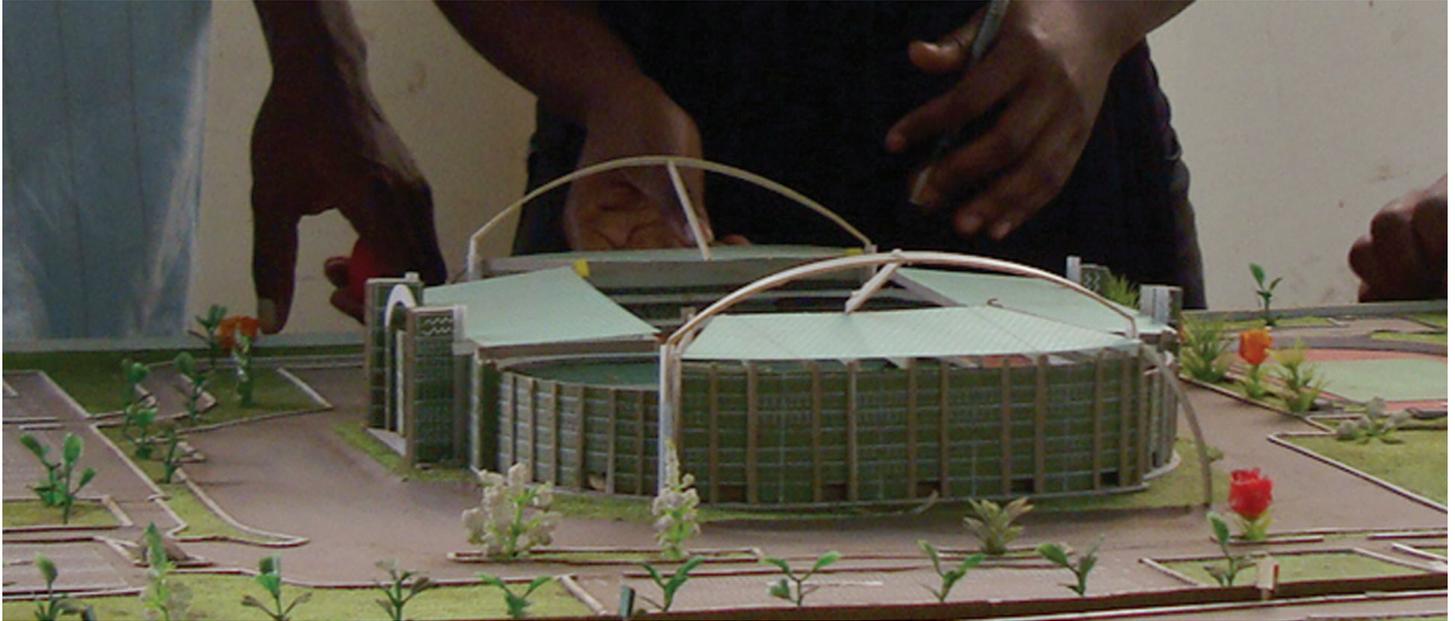


## FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT COURSE BROCHURE – 2013/2014

The Faculty of Engineering and the Built Environment prides itself in the tradition of producing technologists, technicians and artisans for the engineering and related work. The Faculty has approximately 3,000 students, making it the largest single destination for training at tertiary level in engineering and technology in Kenya. We offer training at Certificate, Diploma, and Degree levels. Our training reassures industrial partners that FEBE continue its original mandate of training its graduates for the world of work. This will therefore place all FEBE graduates in good stead in the job market.

The Faculty continues to upgrade its capacity to offer practical and up to date training in order to produce graduates with skills for industry. The Departments of Mechanical and Mechatronic Engineering, as well as Electrical and Electronic Engineering were recently selected by the Ministry of Higher Education Science and Technology to receive equipment worth over Kshs 700 million. This equipment will convert the workshops and some training laboratories in the two Departments into centres of excellence within the wider Eastern Africa Region.

*Prof. Maina Maringa • Executive Dean*



## A. SCHOOL OF ARCHITECTURE AND THE BUILT ENVIRONMENT

In the built environment, **ERGONOMICS** and **AESTHETICS** are key values that must be applied in equal measure. As we transfer these skills, we pay particular attention to the trainee's artistic skills as well as their imaginative capabilities to ensure functionality and success of the end product.

*School* of Architecture and the Built Environment was established to offer cutting edge professional and academic training in line with the College's motto of 'Education and Training for the Real World'. The school's mission is: "to be a centre of excellence in learning, creativity and enterprise, promoting economics, social and cultural well being in the built environment". Dealing mainly with concrete issues, SABE is the space where imagination of future urban and rural places is being constructed and concretized. It is the space where future professionals working on infrastructure, development and the environment are being prepared. The school is home to some 2 000 students in six departments, which offer professional degrees, degrees of technology, diplomas and certificates, making it one of the biggest built environment schools in Kenya. Led by top intellectuals and professionals, the school runs 'professional plus programmes' that focus on building individuals with intellectual (knowledge); professional (discretionary) and technical (application) competencies. Further, students go through annual industry based learning; making them hands on professionals.

## 1. Department of Architecture And Environmental Design

The programmes at the department of Architecture and Environmental Design are designed to train independent, competent and reflective graduates with a high level of critical awareness of their academic discipline. The skill of the architect is design and therefore the design studio remains at the heart of the programme, with theoretical, technical, contextual and environmental studies. The strength of the education and training lies in technical empowerment and innovative design. Our graduates receive training in art so that their designs are pleasing to all the senses.

**Degree Programme:** This course is designed to train extremely creative architects who meet the International Union of Architect's criteria of training for architects. We prepare them for the dynamic practising world through our programmes and studio exercises which enlarge the students view of the world. Members of the department are practising architects who help students engage with the practising world and also prepare them for their future life as architects.

- Bachelor of Built Environment in Architecture/Bachelor of Architecture degree

This is a truncated degree programme comprising two degrees in one and takes six calendar years. The Bachelor of Built Environment in Architecture is available after four years of study and the Bachelor of Architecture degree is available after a further two years of study. One must do the Bachelor of Architecture degree in order to qualify to register as an architect.

- Bachelor of Technology in Architecture
- Diploma in Technology in Architecture

The diploma programme is designed to train competent architectural technology technicians. These are the hands on people who implement the architects dreams. They are strong in design and technology

- Certificate in Architectural Draughtsmanship

The certificate programme is designed for students who require a foundation to the Diploma in Technology in Architecture.

### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<b>Diploma in Technology in: Architecture</b> • KCSE Mean grade 'C-' (minus) with at least C- in Mathematics, physics/Physical Science and English/Geography
<b>Intake:</b>	September
<b>Duration:</b>	Dip.Tech: 8 semesters

## 2. Department of Construction Economics and Management

The construction industry is a dynamic environment involving unique projects that demand innovation and ingenuity to solve problems that inevitably arise. Planning and controlling the allocation of resources and the detailed matching of design and production to the needs of the market for built space are at the core of the construction industry. Career opportunities for qualified graduates from the department are excellent, exciting, fast moving and rewarding. In addition, there are openings for graduates to work in neighbouring countries and foreign based firms as consultants.

The department offers courses in two major fields: Quantity surveying and Construction Management. Currently, the department offers the following programmes at Diploma and Degree levels:

- Quantity Surveying, and Construction Management

### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>Bachelor of Philosophy in Technology (Construction Management)</b></p> <ul style="list-style-type: none"> <li>• Higher Diploma in Construction KNEC or Equivalent with at least 2 years relevant work experience</li> </ul> <p><b>Bachelor of Science (Quantity Surveying)</b></p> <ul style="list-style-type: none"> <li>• Diploma in Building, Civil, Quantity Surveying and Architecture KNEC or Equivalent with at least 2 years relevant work experience</li> </ul> <p><b>Bachelor of Technology (Building Construction)</b></p> <ul style="list-style-type: none"> <li>• Diploma in Building and Architecture KNEC or Equivalent with at least 2 years relevant work experience</li> </ul> <p><b>Bachelor of the Built Environment (Construction Management)</b></p> <ul style="list-style-type: none"> <li>• Diploma in Construction Management, Building, Civil, Quantity Surveying, and Architecture KNEC/or Dip Tech KPUC or Equivalent with at least 2 years relevant work experience.</li> </ul> <p><b>Diploma in Technology in: Building Construction • Construction Management • Quantity Surveying</b></p> <ul style="list-style-type: none"> <li>• KCSE Mean grade 'C-' (minus) in with at least C- in English/ Geography, Maths, Physical Science or Physics, CTI</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<p><b>B.Phil:</b> 4 semesters</p> <p><b>B.Tech, BSc, BBE:</b> 6 semesters</p> <p><b>Dip.Tech:</b> 8 semesters</p>

### 3. Department of Land and Infrastructure Management

The department derives its name from two broad areas of study which mutually synergise to support mankind. While land is the nerve centre of all societies, infrastructure serves as the arteries that spread physical and social development over space and time. It is based on this recognition, that the programmes dociled in the department are developed. The programmes are designed to meet the country specific needs while at the same time addressing global challenges. The department offers programmes in Land Administration and Infrastructure Management at certificate, diploma and degree levels.

The programme on Land Administration deals with processes, institutions, legal framework, social cultural issues and political dynamics which influence access and right to land. It prepares professionals fro careers in national and county governments, research institutions, private practice, universities and nongovernmental organizations among others. On the other hand, the programme on infrastructure management deals with resolution of infrastructural problems that characterize the post implementation period. In addition the programme explores opportunities for integration of sectoral infrastructure to create a platform for holistic infrastructure management.

#### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<b>Diploma in Technology in: Valuation and Property Management</b> <ul style="list-style-type: none"><li>• KCSE Mean grade 'C-' (minus) with at least C- in Mathematics, physics/Physical Science and English/Geography</li></ul>
<b>Intake:</b>	September
<b>Duration:</b>	Dip.Tech: 8 semesters

### 4. Department of Urban and Regional Studies

The Department of Urban and Regional Studies was established in 2008. Since then, it has played a leading role in the education of urban and regional planners and urban designers. The Department is home to both professions, offering a first professional degree in urban and regional planning and urban design and development. Composed of internationally experienced scholars and practitioners, the departments faculty explores the built environment from diverse disciplinary backgrounds and points of view. The departments pedagogically innovative combination of interdisciplinary studios, lecture courses, seminars, and independent study, coupled with a relatively small student size drawn from around the East African region, create an intimate, engaged educational atmosphere in which students thrive and learn.

Accredited by the professional bodies, Urban Design and Development degree program and Urban and Regional Planning degree and Diploma programs focuses on planning for the development, preservation, and enhancement of the built environment. Students learn how to understand, analyse, and influence the variety of forces-social, economic, cultural, legal, political, ecological, and aesthetic, among others-shaping the built environment. Students take full advantage of the curricular and extracurricular offerings of the Design Schools other departments of landscape architecture and architecture. The Department also draws upon the significant resources of The Technical University of Kenya as a whole. Students often cross-register in courses offered by the Schools of Arts and Sciences, the Business and Law School, and the School of Health sciences.

#### COURSES OFFERED

- Bachelor of the Built Environment (Urban Design and Development)
- Bachelor of the Built Environment (Urban and Regional Planning)
- Diploma in Technology (Urban and Regional Planning)

#### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<b>Diploma in Technology in: Urban and Regional Planning</b> <ul style="list-style-type: none"><li>• KCSE Mean grade 'C-' (minus) with at least C- in Mathematics, physics/Physical Science and English/Geography</li></ul>
<b>Intake:</b>	September
<b>Duration:</b>	Dip.Tech: 8 semesters



## B. SCHOOL OF ENGINEERING SCIENCE AND TECHNOLOGY

*Innovation is one way to make the world a better place and even the smallest of innovations is significant enough to improve the life in many ways. Our business is to train the innovators and we invite you to the exciting World of the real Science, Engineering and Technology.*

*Engineering* and Technology has evolved with mankind's zeal to acquire and apply knowledge to improve people's lives. At the School of Engineering Science and Technology, we sharpen your mind to innovatively improve existing processes and systems to solve problems. The school derives its strength in the diversity of programmes, faculty members and students. The school pools expertise in one roof on which students learn multi-disciplinary approach to advanced problem solving skills. These and other factors have made the school a centre of innovation. Innovation is one way to make the world a better place and even the smallest of innovations is significant enough to improve the life in many ways. Our business is to train the innovators and we invite you to the exciting World of the real Science, Engineering and Technology.

## 1. Department of Aeronautical and Aviation Engineering

The department imparts knowledge, skills and attitudes necessary for the design, development, manufacture, maintenance, servicing and safety of aeronautical engineering space model. We build up from the engineering sciences, materials sciences, mathematical concepts, general engineering principles and arts, the fundamental areas of study emphasizes on; engineering design, aeronautical construction, aeronautical technology management and airworthiness.

### COURSES OFFERED

- Bachelor of Engineering in Aeronautical and Aviation Engineering – Options: *Airframes and Engines • Avionics*
- Diploma in Technology in Aeronautical and Aviation Engineering – Options: *Airframes and Engines • Avionics*
- Certificate in Technology – Options: *Airframes and Engines • Avionics • Helicopters Maintenance*

### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<b>Bachelor of Engineering in: Aeronautical Engineering</b> <ul style="list-style-type: none"> <li>• KCSE mean grade of C+ including C+ in the cluster subjects</li> </ul> <b>Certificate in Aircraft Maintenance: Airframe and Engines • Avionics</b> <ul style="list-style-type: none"> <li>• KCSE D+ with at least D+ (plus) in cluster</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Eng:</b> 13 semesters <b>Certificate:</b> 2 – 3 semesters* <b>Short courses:</b> Varied durations*
* Please seek clarification on exact duration from the Department	

## 2. Department of Civil and Environmental Engineering

The department offers courses well structured to meet the ever-changing demands of the civil engineering and construction industry. We also offer specialized courses at Certificate and Diploma levels on request from Government Departments, Local Authorities and the industry. Some of the popular certificate courses include Certificate in Fire Engineering, Civil Engineering and AutoCAD.

All our courses impart practical skills to enable our graduates to enter the job market as employees or self employed people. It is a credit to this department that most of the practicing Civil Engineering Contractors are our graduates. The Department has for a long time served the East and Southern Africa region with students from as far as Botswana, Malawi, just to mention a few. Besides, a fully equipped computer laboratory has been operational in the Department, thanks to the Belgian Government. Lecturers and Students have greatly benefited from this project.

### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<b>Bachelor of Philosophy in Technology in: Civil Engineering</b> <ul style="list-style-type: none"> <li>• Higher Diploma in: Civil Engineering</li> </ul> <b>Bachelor of Engineering in: Civil and Environmental Engineering</b> <ul style="list-style-type: none"> <li>• KCSE mean grade of C+ including C+ in the cluster subjects</li> </ul> <b>Bachelor of Technology in: Civil Engineering</b> <ul style="list-style-type: none"> <li>• KPUC Diploma in Technology in: Civil, Highway Engineering Water Engineering or Building Construction</li> </ul> <b>Diploma in Technology in: Civil Engineering</b> <ul style="list-style-type: none"> <li>• KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering</li> </ul> <b>Certificate – Fire Engineering</b> <ul style="list-style-type: none"> <li>• KCSE Mean grade C- (minus) with D+ (plus) in Mathematics and English</li> </ul> <b>Certificate – Environmental Engineering</b> <ul style="list-style-type: none"> <li>• KCSE Mean grade C- (minus) with D+ (plus) in Mathematics and English</li> </ul> <b>Certificate – Civil Engineering</b>
<b>AUTOCAD</b>	<ul style="list-style-type: none"> <li>• Professional in the Building and Civil Engineering Industry</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Phil:</b> 4 semesters <b>B.Eng:</b> 13 semesters <b>B.Tech:</b> 6 semesters <b>Dip.Tech:</b> 8 semesters <b>Certificate:</b> 2 – 3 semesters* <b>Short courses:</b> Varied durations*
* Please seek clarification on exact duration from the Department	

### 3. Department of Electrical and Electronic Engineering

The department of Electrical and Electronic boasts diversity in programmes and leads in identifying industry needs. The department addresses the needs in the following programmes.

#### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>B.Phil. in Technology in: Electrical and Electronic Engineering</b></p> <ul style="list-style-type: none"> <li>Higher Diploma in: Electrical and Electronic Engineering</li> </ul> <p><b>Bachelor of Engineering in: Electrical and Electronic Engineering</b></p> <ul style="list-style-type: none"> <li>KCSE mean grade of C+ including C+ in the cluster subjects</li> </ul> <p><b>Bachelor of Technology in: Electrical and Electronic Engineering</b></p> <ul style="list-style-type: none"> <li>KPUC Dip.Tech in: Electrical and Electronic Engineering technology</li> </ul> <p><b>Dip.Tech in: Electrical and Electronic Engineering</b></p> <ul style="list-style-type: none"> <li>KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering</li> </ul> <p><b>Electrical Installation Technician III</b></p> <ul style="list-style-type: none"> <li>Pass in Certificate in Electrical Installation Technician II or Electrical Installation Craft Final (KNEC) OR Equivalent</li> </ul> <p><b>Electrical Installation Electrician III</b></p> <ul style="list-style-type: none"> <li>KCSE mean grade D (plain)</li> </ul> <p><b>Electrical Installation Electrician II</b></p> <ul style="list-style-type: none"> <li>Pass in Electrical Installation Electrician III or Grade Test III</li> </ul> <p><b>Electrical Installation Electrician I</b></p> <ul style="list-style-type: none"> <li>Pass in Electrical Installation Electrician II or Grade Test II</li> </ul> <p><b>Certificate in Refrigeration &amp; Air Conditioning</b></p> <ul style="list-style-type: none"> <li>KCSE mean grade D+ (plus)</li> </ul> <p><b>Certificate in Electronics Technician Part III (CET III)</b></p> <ul style="list-style-type: none"> <li>Pass in Certificate in Electronics Technician II or Equivalent</li> </ul> <p><b>Certificate in Electronics Technician II</b></p> <ul style="list-style-type: none"> <li>Pass in Certificate in Electronics Technician I</li> </ul> <p><b>Certificate in Electronics Technician I</b></p> <ul style="list-style-type: none"> <li>KCSE Mean grade C- (minus)</li> </ul> <p><b>Certificate in Electrical Installation Technician II</b></p> <ul style="list-style-type: none"> <li>Pass in Certificate in Electrical Installation Technician I</li> </ul> <p><b>Certificate in Electrical Installation Technician I</b></p> <ul style="list-style-type: none"> <li>KCSE Mean grade C- (minus)</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Phil:</b> 4 semesters, <b>B.Eng:</b> 13 semesters, <b>B.Tech:</b> 6 semesters, <b>Dip.Tech:</b> 8 semesters, <b>Certificate:</b> 2 – 3 semesters*, <b>Short courses:</b> Varied durations*
* Please seek clarification on exact duration from the Department	

### 4. Department of Geospatial Science and Engineering

Geospatial Engineering is the professional discipline concerned with the measurement, analysis, and graphic representation of dimensional relationships; as well as with the design, construction, maintenance, and use of geodatabases. It has its roots in surveying and mapping and encompasses the specialisms of geodesy, surveying, Topometry, hydrography, Geoinformatics, and navigation.

The Department of Geospatial Science and Engineering offers students a world class programmes enabling them to use Geospatial Technology to service an exponentially growing demand for geospatial information about natural and the built environment. Geospatial Engineering is today one of the fastest growing fields of information technology being used in an ever expanding range of applications, including environmental mapping, land and resources management, scientific, strategic planning and development.

Today, the department is a leader in Navigation and Earth Observation research, including high end technologies such as Global Positioning System (GPS), Remote Sensing, Geodesy, Airborne Imagery, LIDAR Mapping and GIS.

#### PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>Bachelor of Philosophy in Technology in: Geoinformation Technology</b></p> <ul style="list-style-type: none"> <li><b>Surveying Technology</b></li> <li>Higher Diploma in: Surveying Technology • Surveying, Cartography, Photogrammetry or Remote Sensing</li> </ul> <p><b>Bachelor of Engineering in: Geospatial Engineering</b></p> <ul style="list-style-type: none"> <li>KCSE mean grade of C+ including C+ in the cluster subjects</li> </ul> <p><b>Bachelor of Technology in: Geoinformation Technology • Surveying Technology</b></p> <ul style="list-style-type: none"> <li>KPUC Diploma in Technology in: Geoinformation Technology</li> </ul> <p><b>Diploma in Technology in: Geoinformation • Surveying</b></p> <ul style="list-style-type: none"> <li>KCSE Mean grade C (plain) with C in Mathematics, Physics, and English, or relevant Certificate in Engineering</li> </ul> <p><b>Certificate in Geographic Information Systems</b></p> <ul style="list-style-type: none"> <li>KCSE mean grade D+ (plus)</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Phil:</b> 4 semesters, <b>B.Eng:</b> 13 semesters, <b>B.Tech:</b> 6 semesters, <b>Dip. Tech:</b> 8 semesters, <b>Certificate:</b> 2 – 3 semesters*
* Please seek clarification on exact duration from the Department	

## CAREER PROSPECTS:

Currently students who graduate with Degree in Geospatial Sciences find employment in such sectors as; Land and Mapping organizations, Financial Institutions, Engineering Construction firms, Parastatal Organizations, the Military and Police and Security Intelligence, Agriculture and Forest Mapping, Water Resources Mapping and Mineral exploration. Also included in these categories are; mobile web applications, vehicular navigation, telecommunication, mobile mapping and Location Based Services.

At the more scientific Level, Geospatial Engineering Professionals deal with the following areas: determination of size and shape of the earth; plate tectonics movements, sea bottom deposits, hydrographic dredging, coastal mapping, urbanization, population growth, environmental degradation, and disaster mitigation and management. Basically every sector of the economy needs the input of geospatial engineering directly or indirectly; and without the foot prints of a Geospatial Engineer, there is no sustainable development.

## 5. Department of Mechanical and Mechatronic Engineering

The Department offers courses that integrate mechanical engineering, electrical engineering, electronic engineering and software engineering. The courses lead to careers in design, manufacture, machinery control, maintenance and automation in present day industry.

Mechanical engineering involves design, manufacturing, operating and maintenance of various systems. It is an engineering discipline that developed from the application of principles of physics, materials science, chemistry and mathematics. The core concepts of mechanical engineering are mechanics, materials and energy. Other knowledge in the field of mechanical engineering and these core principles are used to design and produce industrial machinery, equipment, manufacturing plants, heating and cooling systems, motor vehicles, aircraft, watercraft, medical devices, oil/gas pipelines and other structures.

## COURSES OFFERED

- Bachelor of Philosophy in Mechanical Engineering Technology
- Bachelor of Engineering in Mechanical Engineering – options: *Manufacturing and Industrial Engineering • Industrial Plant and Energy Engineering • Automotive and Autotronic Engineering • Metallurgical and Materials Engineering*
- Bachelor of Technology in Mechanical Engineering Technology – options: *Manufacturing and Industrial Engineering • Industrial Plant and Energy Engineering • Automotive and Autotronic Engineering • Metallurgical and Materials Engineering*
- Diploma in Technology in Mechanical Engineering – options: *Manufacturing*

*Engineering • Industrial Plant Engineering • Automotive and Autotronic Engineering • Air-Conditioning and Energy Engineering • Structural Fabrication and Materials Engineering • Metallurgical and Materials Engineering*

- Diploma in Technology in Mechatronic Engineering
- Certificate in: *Motor Vehicle Mechanic I • Motor Vehicle Mechanic II • Auto-Electrician Stage I • Auto-Electrician Stage II • Certificate in Refrigeration & Air Conditioning • Mechanical Engineering Technician Part I (Plant) • Mechanical Engineering Technician Part II (Plant) • Certificate in Fabrication & Welding*

## PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>Bachelor of Philosophy in Technology in: Mechanical Engineering</b></p> <ul style="list-style-type: none"> <li>• Higher Diploma in: Mechanical Engineering</li> </ul> <p><b>Bachelor of Engineering in: Mechanical Engineering</b></p> <ul style="list-style-type: none"> <li>• KCSE mean grade of C+ including C+ in the cluster subjects</li> </ul> <p><b>Bachelor of Technology in: Mechanical Engineering</b></p> <ul style="list-style-type: none"> <li>• KPUC Diploma in Technology in: Mechanical Engineering</li> </ul> <p><b>Motor Vehicle Mechanic I</b></p> <ul style="list-style-type: none"> <li>• KCSE LEVEL</li> </ul> <p><b>Mechanical Engineering Technician Part II (Production Option)</b></p> <ul style="list-style-type: none"> <li>• Mechanical Engineering Technician Part I</li> </ul> <p><b>Mechanical Engineering Technician II (Plant)</b></p> <ul style="list-style-type: none"> <li>• Mechanical Engineering Technician I (Plant)</li> </ul> <p><b>Certificate in Fabrication &amp; Welding</b></p> <ul style="list-style-type: none"> <li>• KCSE mean grade D+ (plus)</li> </ul> <p><b>AUTO-ELECTRICIAN STAGE I</b></p> <ul style="list-style-type: none"> <li>• KCSE Mean grade C- (minus) with D+ (plus) in Maths and English</li> </ul> <p><b>AUTOCAD</b></p> <ul style="list-style-type: none"> <li>• Professional in the Building and Civil, Mechanical Engineering Industry</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<p><b>B.Phil:</b> 4 semesters  <b>B.Eng:</b> 13 semesters  <b>B.Tech:</b> 6 semesters  <b>Certificate:</b> 2 – 3 semesters*  <b>Short courses:</b> Varied durations*</p>
* Please seek clarification on exact duration from the Department	



## C. SCHOOL OF INFORMATION AND COMMUNICATION TECHNOLOGIES

*Computing and Information Technology has transformed society into a virtual world. We have used this to offer education and training for the real world...*

*The* School of Information and Communication Technologies is one of Kenya's premier institutions for Computer Science Education and Research. Over the years, the school has consistently produced high calibre technicians and technologists to all sectors of Kenya's economy. The school prides itself in programs that prepare students to be industry leaders who can apply information and communication technology across a wide variety of fields.

The School recognizes the role that technology plays in the socio-economic development of the country, and has thus established not only a national vision, but a global one as well. This is being realized through the linkages with current as well as former students, and the larger technology market. In a rapidly changing sector such as ICT, maintaining a good relationship with our stake holders has ensured we are able to meet diverse needs at corporate and individual levels. Our graduates have been absorbed in sectors such as manufacturing and production, training, research and service industries.

The feedback from the industry reflects a need to maintain these linkages and continuously respond to the needs of the market in a manner that ensures priority areas such as information and communication technologies are not overlooked. As a result, courses are deliberately designed to provide an opportunity for trainees to develop a career in Computer Hardware and Software technologies. The Industry has deliberately been involved in the development of the curriculum relevant and acceptable to Industry.

The School is responsible for teaching, training, carrying out research in software and hardware technologies, data communications and computer graphics. The school is equally responsible for the development of curricula for all the computer related courses in the university college with emphasis on practical hands on based training.

## 1. Department of Computer Graphics and Multimedia

The department will be involved in the teaching and training of undergraduate students in the areas of design, development and application of software to use graphics, sound, animation, interactivity elements to create dynamic visual presentations.

### CAREER PROSPECTS:

*Graduates from this course can specialize in Computer Animation or Computer Game Design. Specialists in Computer Animation end up being employed in cartoon animation industry, media industry, product promotion and marketing, film industry, game animation etc. Specialists in Computer Game Design end up as game designers, sound, user interface, game tools programmer, scriptures etc.*

## 2. Department of Computer Science and Technology

The department will be involved in the teaching and training of undergraduate students in the areas of design, research and development of digital electronic systems, computer architecture, and control programs in the electronic data processing applications.

## COURSES OFFERED

- Bachelor of Technology in Computer Technology
- Diploma Technology in Computer Technology
- Diploma Technology in Computer Engineering
- Advanced Certificate in Computer Technology
- Advanced Certificate in Computer Hardware & Network Support
- Advanced Certificate in Software Development
- Certificate in Computer Engineering
- Certificate in Computer Technology

### **PROGRAMMES FOR SEPTEMBER 2013**

<b>Minimum Qualifications:</b>	<b>Bachelor of Technology in: Computer Technology</b> <ul style="list-style-type: none"> <li>• Diploma (TEP) or Equivalent</li> <li>• KCSE C+ (plus) with at least C+ in Eng, Maths and Physics</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	9 semesters for KCSE, 6 semesters for Diploma

### CAREER PROSPECTS:

*Our graduates are expected to find opportunities in fields of software development, engineering and maintenance, computer hardware engineering, repair and maintenance, Network engineering, design and maintenance, technical support, Data clerks, computer librarians, Training in technical institute which are available in software industries, financial institutions for instance banks, SACCO, microfinance institutions, Insurance sectors, telecommunication firms, education sectors, government ministries and parastatals, health and hospital sectors, manufacturing industries systems, airways systems, entertainments industries systems transport industry systems, NGOs, media broadcasting houses, Publications sectors, Computer assembly industries, business retail systems.*

## 3. Department of Computer Systems and Communication

The department will be involved in the teaching and training of undergraduate students in the area of computer architecture, the computer networks and telecommunication systems for data and information transmission.

### COURSES OFFERED

- Diploma in Communication & Computer Networks
- Certificate in System Technical Support

## PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>Bachelor of Technology in: Communication and Computer Networks.</b></p> <ul style="list-style-type: none"> <li>• KCSE C+(plus) with at least C+ in Eng, Maths and Physics</li> </ul> <p><b>Bachelor of Technology in: Communication and Computer Networks.</b></p> <ul style="list-style-type: none"> <li>• Diploma (TEP) or Equivalent</li> </ul> <p><b>Certificate in: Computer Networking</b></p> <ul style="list-style-type: none"> <li>• KCSE D+(Plus) with at least a D- in Maths/Physics</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Tech:</b> 9 semesters for KCSE, 6 semesters for Diploma <b>Certificate:</b> 2 semesters

### CAREER PROSPECTS:

*Students who have graduated in computer systems and communication are expected to find opportunities in system administration, web designing, network designing and telecommunication industry.*

### 3. Department of **Information Systems and Technology**

The department will be involved in the teaching and training of undergraduate students in the areas of applications and management systems that would be used in data processing, data capture and data storage and transmission of instrumentation for the business applications.

The business applications entail systems that are aimed at enhancing the operation and management of the organization.

The goal of the program is to prepare students with broad, integrated IT knowledge including communications, computer networking, computer-based systems, database management, software development and website development. Students learn how to evaluate current and emerging technologies; identify user needs; design user-friendly interfaces; apply, configure and manage technologies; and assess the impact of technologies on individuals, organizations and society.

### COURSES OFFERED

- Bachelor of Technology in Information Technology
- Diploma in Information Technology
- Diploma in Information System
- Advanced Certificate in Information Technology
- Certificate in Information Technology

## PROGRAMMES FOR SEPTEMBER 2013

<b>Minimum Qualifications:</b>	<p><b>Bachelor of Technology in: Information Technology</b></p> <ul style="list-style-type: none"> <li>• KCSE C+ (plus) with at least C+ in Eng, Maths and Physics</li> </ul> <p><b>Bachelor of Technology in: Information Technology</b></p> <ul style="list-style-type: none"> <li>• Diploma (TEP) or Equivalent</li> </ul> <p><b>Certificate in: Information Technology</b></p> <ul style="list-style-type: none"> <li>• KCSE D+(Plus) with at least a D- in Maths/Physics</li> </ul>
<b>Intake:</b>	September
<b>Duration:</b>	<b>B.Tech:</b> 9 semesters for KCSE, 6 semesters for Diploma <b>Certificate:</b> 2 semesters

### CAREER PROSPECTS:

*Graduates of Information Technology program are qualified IT professionals who are prepared for careers in a wide-range of IT-related areas, like: Computer networking, Network and systems administration, Website development and management, IS manager, Database administration, Software development, IS auditors, Project management and System analyst/ Programmer*

### 4. Department of **Scientific Computing & Modelling**

The department will be involved in the teaching and training of undergraduate students in the areas of design and application of embedded systems and numerical control software for natural, scientific and industrial systems.

### CAREER PROSPECTS:

*Graduates of Scientific Computing and Modelling program are qualified IT professionals who are prepared for careers in Development and testing of programs to be used in: Engineering Testing, Engineering Material Testing, Robotics, Manufacturing and Simulation of Engineering Systems.*