



THE TECHNICAL UNIVERSITY OF KENYA

# TUKE NEWS

A publication of the Office of the Vice-Chancellor

September-December 2019



## Kenyans name new planet

### ALSO INSIDE:

- New admin structure adopted
- Students top in Africa Awards
- TU-K Choir is the best
- Willy Mutunga urges activism
- Student recruitment goes digital



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# EDITORIAL



As we come to the end of 2019, it's time to take stock of the year that was. Today we are celebrating the 7<sup>th</sup> Graduation Ceremony. We are also celebrating the graduation of the second cohort of our postgraduates - Master's and PhDs. The University has continued to attract former students and others that studied in different universities both locally and internationally to pursue a wide range of our postgraduate programmes.

In another big news of the year, recently our staff and students spearheaded the search and naming of a new planet. Three names were later submitted to the International Astronomical Union (IAU), the highest known professional body of astronomers. The IAU is set to select one of these pairs of names and make the announcement in December 2019 from its headquarters in France. The star and its exoplanet will henceforth be known by their Kenyan names.

This year, once again the students did the University proud. They topped the African MICE Awards during a ceremony hosted in Nairobi. The win was significant in many ways: Our students had also won in 2017 and 2018 in different categories. The conclusion from the wins is that TU-K is doing great things in the discipline and science of Tourism and Event Management.

On another note, TU-K's Student Choir was ranked the best among the universities by Kenya Music Festival due to its quality of tone and details in the performance of choral music.

TU-K lecturers have also been very active in conducting research presenting papers in high-profile international events such as conferences and workshops. This means our faculty are interacting and exchanging ideas and knowledge with the best from around the globe.

As an affirmation and vote of confidence in our work, many international institutions of higher learning and research have expressed interest in collaborating with TU-K. As an institution, we will continue supporting collaborative activities meant to raise the University's profile.

Recently, TU-K adopted a digital system of admission of students. So far, slightly more than 11,500 students have been issued with the smart cards, which translates to 97 per cent success. The aim of this initiative is to create a sustained student record system for easy access of their academic progression and information.

Finally, the University is now in the process of implementing a new Organisational Structure as approved by the Council in September 2019. The main objective of the new structure is to improve service delivery to students and the taxpayer.

Merry Christmas and Happy New Year 2020!

# VC back from UK with a bag of goodies

The Technical University of Kenya is set to benefit from collaborative pacts with the Association of Commonwealth Universities (ACU) and United Kingdom (UK) institutions of higher learning in areas of research and knowledge exchange.

Other universities in Kenya, research institutions, high school students and university student leadership will also benefit from various partnership opportunities that have been lined up by ACU. This is with emphasis on promotion of Science, Technology, Engineering and Mathematics (STEM) among female learners.

The agreements also extend to cooperation with UK industries to empower young people through innovative models to solve socio-economic challenges in Kenya, unemployment and set up opportunities for wealth and job creation.

This was disclosed after the October 2019 visit by the VC Prof. Francis Aduol to the United Kingdom where he met ACU leadership, heads of research institutions and Kenya's High Commissioner to Britain, Mr Manoah Esipisu.

Other institutions the VC visited included; Institute of Physics (IoP), Royal Academy of Engineering, Imperial College, London and Cranfield University and the UK International, an arm representing UK universities globally, as well as the Students' Union



*The VC, Prof Francis Aduol (2<sup>nd</sup> left) with ACU Senior Manager Membership Mr George Ananga (left), Senior Manager, International Development, RAE, Ms Waireri Wairara (2<sup>nd</sup> right) and Executive Officer in the Vice-Chancellor's Office, Mr Cosmas Kanyadudi.*

of University College, a consortium of student leadership in London.

Prof. Aduol was accompanied by ACU Senior Programme Manager Mr George Ananga and the Executive Officer in the Vice-Chancellor's Office, Mr Cosmas Kanyadudi.

## **Esipisu to link varsities with UK institutions**

Kenya's High Commissioner to Britain, Mr Manoah Esipisu, indicated that the High Commission will establish

a platform for joint and mutual collaboration between UK and Kenyan vice-chancellors that would culminate in a joint conference in Nairobi.

In this regard, the Vice-Chancellors' Committee will establish a platform for staff exchange among partner universities aimed at sending some technical staff to Universities UK International (UUKI) for benchmarking purposes.

Prof. Aduol, who until recently chaired the Kenya Vice-Chancellors' Committee, will initiate consultations with the committee to organise a conference in Nairobi and invite members of UUKI to share experiences and consolidate collaboration efforts.

The High Commissioner at the same time noted that collaborations with the UK research and higher learning institutions and industries will advance Kenya's influence as a consultancy hub in Africa and globally.

UUKI in this regard, has established partnership that would promote collaborative research that would have relevance to community challenges such as the traffic menace in Nairobi. The joint research collaboration will make reference to case studies from



*The VC, Prof Francis Aduol with Kenya's High Commissioner to Britain, Mr Manoah Esipisu*

the on-going research on traffic control at the Imperial College, London.

**ACU to work with TU-K**

The Association of Commonwealth Universities (ACU) signed collaborative understanding with TU-K including partnership to host a workshop for vice-chancellors from Africa and UK to set the higher education agenda for the forthcoming Commonwealth Heads of Government Meeting (CHOGM) meeting in Rwanda.

ACU will also support TU-K's Schools Outreach programme and in this regard, invite some Australian universities to partner with TU-K. Collaboration with ACU will further see TU-K benefit from the Queen Elizabeth Commonwealth Scholarship programme.

Students studying Journalism and International Relations were challenged to apply for the upcoming Summer School in Cape Coast University in Ghana.

In areas of environmental research and developments, ACU will initiate

**At the Institute of Physics (IoP), Prof. Aduol met with Deputy CEO, Rachel Youngman, where they discussed various agreements including exchange programmes, capacity building and organising joint conferences.**

strategic engagements between TU-K and other Commonwealth universities to conduct collaborative research in sustainable cities, integrate SDGs and climate resilience in universities curricula, and be champions of the Blue Charter in line with the Blue Economy platform.

TU-K will support ACU's implementation of Partnership for Enhanced and Blended Learning (PEBL) programme. Already 23 universities in East Africa are running the blended curriculum.

**Engineering curricula to be reviewed**

The Royal Academy of Engineering (RAE) and Imperial College, London (ICL) committed to help universities in Africa review curricula and policy in engineering fields to make them responsive to global labour market demands.

The University will invite professionals from both RAE and ICL to share experiences and expectations and emerging trends in engineering and curricula development.

RAE and TU-K will organise a pre-conference either in Nairobi or London to prepare African Scholars' agenda for the SDG conference in March 2020 in London.

TU-K will also establish collaboration with Imperial College, London, to offer short refresher courses for lecturers of Geospatial Engineering.

**Cooperation with IOP**

At the Institute of Physics (IoP), Prof. Aduol met with Deputy CEO, Rachel Youngman, where they discussed various agreements including exchange programmes, capacity building and

organising joint conferences.

“IoP will sign a memorandum of understanding with TU-K to collaborate in the promotion of STEM with emphasis on physics among women in tertiary and university education and girls in high schools. TU-K will organise a workshop bringing together professors of physics in Kenya and IoP leaders in Nairobi to develop strategies of popularising physics as a career and subject of study.

IoP will also establish collaborative network with African universities, to promote research, staff development and employment opportunities in economic physics as well as recognise and collaborate with TU-K in the delivery of the university's BSc and Bachelor of Technology in Physics.

**Collaboration with Cranfield**

TU-K and Cranfield University will soon conclude discussions on the proposed double degree programme at Masters' level that include revision of Engineering curriculum to six years thus making the two institutions synchronise their academic programmes within the Bologna Framework.

This will extend to develop refresher courses targeting technicians and technologists' certification.

The collaboration will strategically incorporate the active partnership with industry players including; Boeing, Kenya Airways, Airbus, General Electric, KenGen, among others.

**Student to visit London**

Kenya's High Commission in London also revealed that it will support an exchange and leadership development programme targeting student leaders.

The VC at the same time met United Kingdoms' Students' Union of University College, London, where he established partnership through a memorandum of understanding between SATUK and Students' Union, UCL. Among its activities will be a training workshop at UCL for SATUK leaders to learn positive experiences and best leadership and corporate practices.



*Ms Lincey Clark with the VC, Prof Francis Aduol on a guided tour of the modern headquarters of the Institute of Physics, London.*

# TU-K to work with Goethe Institut to empower creative industry



Training facilitators, Graphic Designer Victor Omolo, Actress Nice Githinji and Creative Industry Consultant and Disk Jockey David Muriithi during one of the sessions at TU-K.

The Goethe Institut Nairobi has partnered with Technical University of Kenya (TU-K) to train Kenya's creative industry players on basic business and professional skills.

The two industries agreed to have creative industry players in Kenya benefit from a six-month training held fortnightly at TU-K. The training is set to engage participants in practical approaches as well as provide linkage opportunities to local and global creative industries.

The joint project is under JENGA CCI project by Goethe Institut - Nairobi which is supported by the German Federal Ministry for Economic Cooperation and Development (BMZ), the Deutsche Gesellschaft für internationale Zusammenarbeit (GIZ)

With its practical training and linkages to the creative industry in Kenya, JENGA CCI project partnered with TU-K to implement its mandate in knowledge sharing and empowerment

among practitioners and continuing university students.

TU-K staff; Mr Gibson Mawira - Department of Music and Performing Arts, Dr. Lydia Muthuma - Department of Design and Creative Media and Dr. Caroline Mose - Department of Music and Performing Arts were appointed as project administrative and implementing partners.

Seasoned facilitators in the industry in areas of writing, film and TV production, radio, music, design, communication and content

**The project is envisaged to extend its training through reaching out to other partners and industry professionals. Through this and many other like projects, TU-K, is becoming a major creative industry intermediary in Kenya.**

development helped in the training. They included; Kingwa Kamencu, Cajetan Boy, Taye Balogun, Cindy Ogana, Actress Nice Githinji, Victor Omolo, David Muriithi, Gregory Mwendwa among others.

So far, the project has trained 40 creative practitioners and university students in two cohorts including two TU-K students. The TU-K administrative team approached and planned the project around the idea of building collaborations with industry, with all the courses listed in the curriculum being facilitated by the facilitators.

At close of training project, participants will be recognised and awarded with certificates.

The project is envisaged to extend its training through reaching out to partners and industry professionals. Through this and many other projects, TU-K is becoming a major creative industry intermediary in Kenya.

## Students urged to harness ICT

Geospatial experts have challenged students and practitioners to embrace technological growth in geospatial and survey fields to meet market demands.

Market leaders, researchers and business people, said that young learners should take up responsibilities in creating new and brilliant technologies to improve socio-economic development and solve emerging challenges.

The experts spoke during the School of Surveying and Geospatial Science symposium and expo recently held at the Technical University of Kenya.

The companies and institutions who showcased some of their technologies included Microdrones (Germany), Federation for Young Surveyors (Rwanda), Oakar Servicers, Geiods Services, Oesri, Geodev Company, the Institute of Surveyors of Kenya, Jubilee Insurance, Kenya Forest Service and Mapping for Sustainable Development.

The experts also noted that they would help link students with professionals for mentorship and internships that would expose them to practical facets in the field of spatial and geo-marketing.

Microdrones Marketing Director and Representative in Africa, Mr John Hano, noted the importance of using unmanned aerial vehicle popularly known as drone in mapping that has proved effective and easier to operate compared to previous use of airplanes.

"Microdrones are computerised and can help collect data faster and do not



*Geospatial experts speak to students during the School of Surveying and Geospatial Science symposium and expo.*

require a lot of skills to operate," said Mr Hano adding that the drones are accurate.

Ms. Charlene Jepkosgei, a member of staff at the University who represented the Director of the School, Prof. Patrick Ogao, challenged students to embrace the industry and seek to learn new technologies as this will open up opportunities for them.

Away from classwork, Mr Roseter

Gichuki from Geodev also noted that interaction with new technologies environment aids in innovative ideas. "The devices we are showing you here today are the new technologies in the market, but you should note that in another three years, these devices will have been replaced by new technologies," Mr Gichuki added.

Dr. Collins Mwangi from the Institute of Surveyors of Kenya asked students to take self-initiative to acquire skills in order to be easily absorbed in the industry. He noted that part of institution's responsibility is to link students with the industry.

"Making yourself unique in the market is key, you all might have First Class degrees, but the extra you have is what might earn you a job; employers today are very keen on practical skills," said Dr. Mwangi.

Mr. Solomon Kariuki, a representative from Telkom Kenya, also challenged students to embrace the use of internet to explore and enhance their learning. "Internet has myriad of information, you need to harness these platforms for research and in your quest for development of new technologies," said Kariuki.



*Microdrones Marketing Director and Representative in Africa, Mr John Hano, speaks to students.*

# Hands-on-training ensures graduate employability - VC

The Vice-Chancellor, Prof. Francis Aduol, wants the country to embrace technical-based training to quickly develop in areas of engineering technologies, ICTs, manufacturing and process industries among other areas.

Imparting graduates with practical skills assures their employability and bestows them with self-employment competences thereby developing ingenious solutions and job creation ventures.

Prof. Aduol was speaking recently during a one-week Competency Based Education and Training (CBET) of TU-K trainers at the College of Insurance in Nairobi. The training is part of the initiatives the University is putting in place to prepare the teaching and technical staff in adopting CBET.

Prof. Aduol said wrong orientation had long derailed interest among Kenyan learners and across Africa to take up technical-based courses that give them an edge in current job market. He noted that graduates with these skills today are most sought after in the industry.



*VC Prof. Francis Aduol (right) with senior members of faculty during the workshop at South C.*

He said the widespread notion in the continent that polytechnics and institutes of technology were meant to accommodate students that had failed to qualify to join universities to pursue degree courses had now been overtaken by events.

"This is what made the continent lag behind in practical skills training. It is not a must that every student must

qualify for degree course to become useful in society. The continent needs workers with skills such as plumbing, welding, carpentry, masonry, just but to name a few," said Prof. Aduol.

Prof Aduol noted that the continent needs to learn from Europe that saw the problem with the traditional university many years ago. "At the onset of the Industrial Revolution, France



*VC, Prof. Francis Aduol with senior members of staff during the Competency-Based Education and Training (CBET) workshop at the College of Insurance in Nairobi.*



**“It is not a must that every student must obtain a degree to become useful in society. Workers with skills such as plumbing, welding, carpentry and masonry, just but to name a few are needed.”**

– Prof. Aduol.

established the Polytechnic of Paris and the concept spread to Germany, Britain and Italy. In the United States of America, it was the same concept that motivated the establishment of Massachusetts Institute of Technology (MIT) to train hands-on skills. This is what, to a large extent, led to the fast spread of technical skills that aided the level of industrialisation witnessed in Europe in the 19<sup>th</sup> Century,” he added.

Some of the topical areas the symposium deliberated on included; overview of reforms in education and training conducted by Curriculum Development, Assessment and Certification Council Secretariat that extended to procedures for competency based curriculum development, assessment standards and certification. The symposium also discussed the implementation of competency based



*A section of the faculty follow proceedings at the College of Insurance, South C*

courses in TVET institutions as well as models of developing occupational analysis.

The VC hinted that TU-K had taken the lead in training technical based programmes noting that the university had received accolades from the industry and professional bodies.

“I am sometimes not surprised to see so many KCSE graduates seeking to transfer from degree programmes to pursue diploma courses offered at TU-K; this is due to the popularity of our hands-on training that gives our students an edge in the job market.

The students already know which programmes will enable them acquire jobs quickly,” said Prof. Aduol.

In Africa, TU-K has become a point of reference in matters technology. Many institutions have kept visiting TU-K to benchmark on the best practices especially in TVET. TU-K has sufficient and well-stocked engineering workshops as well as science laboratories.

“To remain the leader in matters TVET, TU-K is always re-engineering its way of doing things for the benefit of the country,” Prof Aduol concluded.



# VC urges varsity staff to up service delivery



VC, Prof. Francis Aduol, speaks to the support staff.



University support staff follow proceedings during the meeting with VC.

The Vice-Chancellor, Prof. Francis Aduol, recently met all support staff and advised them on the importance of quality service delivery in the university.

During the meeting, he addressed various units where laxity had been observed for quite some time and asked the staff in all cadres to be diligent and committed to their work.

“It does not matter what people think of us or how well we groom our students. People who come here will always judge us from what they see once they enter this University”, he said.

He further said that universities run on the basis of networking with other institutions of higher learning and industries so it should be well kept.

“Imagine a situation where I get visitors from abroad willing to collaborate with us in projects to assist our students, then once they get here they find an unkempt compound and littered offices. These

visitors can turn around and leave due to the profound negligence they may observe.”

The VC urged the cleaners and other ground workers to adhere to the official working hours, avoid skipping work and become more effective and efficient.

On University safety and security, the relevant staff were asked to be more alert to happenings around the University by ensuring entry points and exits were secure. He asked the staff to always wear their uniforms

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**On University safety and security, the relevant staff were asked to be more alert to happenings around the University by ensuring entry points and exits were secure. He asked the staff to always wear their uniforms while in the University for ease of identification.**

while in the University for ease of identification.

He observed that some of the facilities such as student hostels, Senior Staff Common Room, and student cafeteria played a big part to the image of the University and must be kept functional.

Prof. Aduol urged all the staff to be proud of themselves and the University by doing things well as they are supposed to clean and take care of the amenities in order to ensure smooth workflow leading to more benefits and job satisfaction.

The staff pledged to adhere to the University code of regulations to ensure TU-K becomes a place where all potential students would like to come and study.

Among those present were DVC-ASA, Prof. Paul. Shiundu, Director, Health and Wellness Services, Dr. Kodhek, Director of Supply Chain Operations, Mr. Finley Gwaro, Director, Student Support Services, Prof. Omondi Oketch, among others.

# Colleagues bid Dr. Mungai farewell

TU-K Scholars have showered praises to their colleague, Dr. Esther Mungai, who was recently appointed as Kenya's deputy ambassador to Germany.

In a farewell party organised by the School of Business and Management Studies, Vice Chancellor Prof. Francis Aduol commended Dr. Mungai saying this had not only raised the University's image and status worldwide but was a direct reward and recognition of hard work and commitment by staff in the university.

Prof. Aduol said such appointments come with big responsibilities and was confident that Dr. Mungai was up to the task and will deliver appropriately by projecting Kenya's image positively to the world. He added that the appointment was important because Germany was the first country to recognize Kenya during independence in 1964. He said Germany had continued to sustain and maintain this relationship for many years by giving Kenyans more recognition compared to other African countries and by supporting the country in various fields such as in higher education, agriculture, art and culture among others.

He further said that Germany was now regarded as a leading economy in Europe and asked Dr. Mungai to take advantage of the relationship to benefit Kenya through education and other social economic opportunities. The VC noted that to achieve this, the Dr. Mungai needed to learn the rich culture and language in order to easily unlock these opportunities adding that Germans had great trust in persons who spoke their language.

Prof. Aduol wished her well and asked



*Dr. Esther Mungai (centre) with members of staff cut a cake during her farewell party.*

her to treat everyone with respect and decorum while on duty, and not forget friends with whom she had grown together. "Do not allow power to take over during your service to the nation. Serve with humility because the world is a stage where you will never know who will be your boss the next day," the VC observed.

On her part, Dr. Mungai said her mission was to develop and leverage on Kenya's relations with other countries for the interest of Kenya and Kenyans. "My mission and that of my colleagues is clear: to develop and leverage on Kenya's relations with other countries for our country's interests and those of Kenyans," she said. She promised to serve the country with humility and excellence in her endeavors.

She thanked the VC for being a good mentor and for providing her with the desirable environment for growth and development and asked her colleagues to

make use of the opportunities available at the University to develop themselves.

She said her new career will last for a period of 48 months and thanked the President of the Republic of Kenya, Uhuru Kenyatta for the great honour. She said the new career had its own challenges but was confident that with the support, cooperation and trust from her family, colleagues and friends, she was sure to make it.

"My dear colleagues, I will always remember you, as the memories live in the most important part of our minds. I thank you for all your kindness, support, and friendship. You supported me in many ways. With you, I experienced many positive moments which I will always remember.

The ceremony took place at the University's Senior Common Room. It was punctuated with colour and pomp as colleagues expressed their joy by cutting a send-off cake.



*VC, Prof. Francis Aduol, Dr. Esther Mungai (3<sup>rd</sup> from right) and members of staff during Dr. Mungai's farewell party at the University.*

# Licence of Human Nutrition and Dietetics programme renewed



*Kenya Nutritionists and Dieticians Institute Council Member Dr. Gordon Nguka (left) with the Institute's CEO, Dr. David Okeyo (2<sup>nd</sup> left), hands accreditation certificate to the VC Prof. Francis Aduol. Looking on - left is DVC Prof. Paul Shiundu (right) and Dr. Judith Waswa (second from right), an Academic Team Leader at the Department of Human Nutrition and Dietetics (2<sup>nd</sup> right).*

TU-K has been accredited by the Kenya Nutritionists and Dieticians Institute to train in both Bachelor's and Diploma programmes in Nutrition and Dietetics.

In an inspection report, KNDI Chief Executive Officer, Dr. David Okeyo, said he was pleased that the University had met all compliance requirements for programmes offered by Department of Nutrition and Dietetics.

He said the report recorded compliance level of 85.8 per cent, giving the University the clean bill of health to offer Diploma of Technology in Nutrition and Dietetics, Bachelor of Science in Human Nutrition and Dietetics and Bachelor of Technology in Nutrition and Dietetics programmes.

The report indicated that the university had scored exemplarily well in all thematic areas such as standards related to educators, standards related to students, governance, leadership and management standards and infrastructure. Other areas observed included materials and equipment, curriculum, clinical practice, quality management, monitoring and evaluation, examination process and research. The average score grew from the previous 71.8 per cent to 85.8 per cent.

"The compliance level of the training of the Nutrition and Dietetics students at Technical University of Kenya

currently stands at 85.8 percent for all programmes in the Nutrition and Dietetics Department," said the report.

Hence, the report said, "The Kenya Nutritionists and Dieticians Institute (KNDI) team is pleased to share a brief report as a feedback for the inspection done on 13<sup>th</sup> August 2019

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**This achievement has not come easily. As a University, we have invested heavily on academic staff, equipment and space that are crucial for the smooth delivery of the programmes.**

— Prof Aduol

and subsequent correspondence with regard to training graduates in Diploma of Technology in Nutrition and Dietetics, BSc. in Human Nutrition and Dietetics and Bachelor of Technology in Nutrition and Dietetics programmes in accordance with Section 6(d) of the KNDI Act No.18 of 2007.

Dr. Okeyo pointed that the section provided the KNDI Council the mandate to approve institutions training persons seeking registration as Human Nutrition and Dietetics practitioners. He commended the University for ensuring the programmes were handled by skilled academic and technical staff to ensure quality training as expected in

the market adding that KNDI's role was to ensure the maintenance of the quality standards.

While receiving the certificate in his office, TU-K Vice –Chancellor, Prof. Francis Aduol, said he was pleased with the award saying the University was committed to ensure the standards spelled out by KNDI were strictly followed to enhance the quality of Human Nutrition and Dietetics training. He said the award meant that graduates leaving the institution were professionals who would enter the job market and discharge their duties with confidence.

The VC noted that the achievement did not come easily as the University had invested heavily on academic staff, equipment and space that are crucial for the smooth delivery of the programmes. He said that a nutritional counselling lab had been established where professional assessment and information services would be offered based on dietary changes. The university had also recruited a clinical instructor to support the teaching of specialized clinical programmes in nutrition and dietetics. The VC, however, said the achievement was challenging since the university was now required to maintain the set standards adding that TU-K had entered into partnership with Mama Lucy Hospital and Jomo Kenyatta University of Agriculture and Technology (JKUAT) for practical training sessions for the students in the two programmes.

Present during the award were the Executive Dean of the Faculty of Applied Sciences and Technology, Prof. Francis Gatheri, Director of the School of Health Sciences, Prof. Alfred Orina and Thematic Leader, Department of Human Nutrition and Dietetics, Dr. Judith Waswa. On the other hand, KNDI was also represented by the Secretariat Registrar, Elizabeth Mboya, Quality Assurance Registrar, Lorna Ombasa and a member of the KNDI Council, Dr. Gordon Nguka.

Prof. Orina said that the School was proud of the achievement having worked hard for the last five years to achieve it, adding this marked a milestone in the health training section of the University.



Former Chief Justice Dr. Willy Mutunga with TU-K DVC-ASA, Prof. Paul Shiundu, University Students Support Services Director, Prof. Omondi Oketch, members of staff and SATUK officials led by the chairman Paul Karanja and students view portraits of Heroes and Heroines during a 'Team Courage' Exhibition held at the University recently.

## Find your space in social activism, former CJ Willy Mutunga urges students

TU-K students have been challenged to identify their social roles in society and play them effectively for meaningful change.

Former Chief Justice and President of the Supreme Court of Kenya, Dr. Willy Mutunga, noted that heroism in the world was begun by young leaders who were mostly in their 30s such as the late Tom Mboya, Thomas Sankara, Patrice Lumumba and Martin Luther King Jr. among others who had a vision and took steps to change their societies. Dr. Mutunga challenged the students to take up their activism space in good time.

Dr. Mutunga was giving a keynote address at the University's Main Hall during the #TeamCourage exhibition, said the event, which showcased Kenya's past heroes and heroines, was aimed at celebrating the leaders and ignite the passion in young people.

He said #TeamCourage had begun the campaign with pictures of dead heroes to enable the audience evaluate their contributions and take into account their achievements, reiterating the role some like Goldenberg whistleblower, David Munyankei, played and the values of transparency and accountability he stood for.

Dr. Mutunga noted that the choice of heroes and heroines in Kenya must be based on a clear trajectory considering the degree of individual consistency and commitment towards a fair, just and open society, to which he said everyone has a role to play.

"Think of what you can do for yourself, your country and everyone because each one of us has enough space to change society," he said.

He, however, observed that putting someone on a trajectory to heroism needed thorough research, constant interrogation and a consensual social discourse. He advised that heroism was not only confined in politics but cuts across other fields of knowledge such as those who stood for proper environmental conservation, quality engineering and architecture, good health care, food security, music and other

**Dr. Mutunga who was giving a keynote address at the University's Main Hall during the #TeamCourage exhibition said the event, which showcased Kenya's past heroes and heroines, was aimed at celebrating the leaders and ignite the passion in young people.**

social-economic spheres.

He singled out former student activists Dr. Eric Nyanjom and Rev. Fr. Dr. John Ndikaru Wa Teresia who were present for playing their revolutionary roles during their days at the University and asked them to nurture young people along the lines. Dr. Mutunga was accompanied by #TeamCourage leader Ms Irene Kuhi.

On his part, the Deputy Vice-Chancellor in-charge of Academics, Research and Student Affairs, Prof. Paul Shiundu, commended the organizers of the event saying it will be of benefit to freshers to learn the contribution of both freedom fighters and political liberators during the struggle for independence and the quest for multipartism respectively. He added that as centres of excellence in research, the exhibition was a major resource for present and future generations on ways of conserving the Kenyan culture.

Also present were the Executive Dean, Faculty of Applied Sciences and Technology, Prof. Francis Gatheri, Director of Student Support Services Prof. Omondi Oketch, Director of Health and Wellness Services, Dr. Argwings Kodhek among others.

# TU-K don speaks at ICPD25 Summit



*Dr. Tammary Esho (2<sup>nd</sup> from right) speaks at a panel during the ICPD25 Summit recently held in Nairobi.*

A TU-K lecturer and sexual medicine expert has asked universities in the country to create awareness on Sexual and Gender-based Violence (SGBV) campaigns, Female Genital Mutilation (FGM) and sexual harassment campaigns for both students and staff.

Dr. Tammary Esho, who spoke during the recent International Conference for Population and Development Summit (ICPD25) side event themed; Prevention Monitoring and Control of SGBV in Higher Institutions of

Learning underscored that gender-related violence in universities are not effectively managed.

“There is need for a one-stop shop for medical and legal services for GBV victims and survivors at the universities through legal, medical, psychotherapy and clinical counseling,” said Dr. Esho.

The 25<sup>th</sup> ICPD Summit that was held in Nairobi in November made commitments centred around achieving zero unmet need for family planning information and services, zero

preventable maternal deaths, and zero sexual and gender-based violence and harmful practices against women and girls.

Dr. Esho said there was need for creation of linkages and partnerships with CSOs, CBOs, NGOs and government especially in resource mobilisation strategies.

She also noted that alumni need to be brought on board to support these efforts at the universities where they could share similar agenda and interests.

## Sexual and Reproductive Health Rights Network partners with TU-K

TU-K is set to collaborate with Belgium-based Academic Network for Sexual and Reproductive Health Rights and Policy (ANSER). This will be in areas of academics and policy formulation, and extending to hosting joint research projects, training programs and conferences.

ANSER is based at the University of Ghent and International Centre for Reproductive Health (ICRH).

Other areas of corporation will include; capacity-building initiatives, student and faculty exchange programmes, and inter-disciplinary collaboration opportunities between various faculties like; medicine and engineering.

Members spearheading this collaboration include; Prof. Olivier Degomme, Director at ICRH and ANSER in University of Ghent, Emilie Peters from ICRH and ANSER

Policy Officer, University of Ghent and Annemarie Middleburg from University of Amsterdam.

Multidisciplinary research team from TU-K include; Dr Tammary Esho, Dr Joyce Omwoha, Mr Justin Nyasinga and Mr James Munyao.

The initial collaborative meeting recently saw members discuss the current policy debates and innovative training programmes.

As a global resource for Sexual and Reproductive Health and Rights (SRHR) policy research, education and service delivery, ANSER will help in building evidence-based policies that support sexual and reproductive rights across board. SRHR lies at the immediate intersect of the Sustainable Development Goals (SDGs) for Health and Gender Equality.

# Prof. Baki puts TU-K in the world map of Space Science

There is no debate that Prof Paul Baki is the prime mover of Space Science development in Kenya. He is the immediate former Director, School of Physics and Earth Sciences, and current Academic Team Leader, Department of Astronomy and Space Science.

In the year 2010 when he moved from the University of Nairobi to the then Kenya Polytechnic University College, he installed a Satellite Beacon receiver in collaboration with Kyoto University, Japan. He then joined the league of world space scientists as a member of the Expert Group C (Space Weather): Long Term Sustainability of Outer Space Activities, of the United Nations Committee on Outer Space Affairs (UNCOPUOS). It is here that technical issues pertaining the sustainability of outer space are refined before being ratified by the UN General Assembly. His networks across the world have seen TU-K become a hub for Radio Astronomy training not only in Kenya but in the region; the first university in Kenya to set up a Nanosatellite development laboratory in collaboration with Clyde Space (UK). Today, the University boasts of a number of space infrastructure including an 8 inch digital Celestron

telescope that was recently used to observe the transit of mercury on November 11, 2019.

Prof. Baki is a distinguished member of the Africa Union Commission's Working Group on Space Strategy and Space policy, where he helped develop the African Space Policy, African Space Strategy, and Statutes which paved way for the establishment of the African Space Agency (AfSA) whose headquarters will be in Cairo, Egypt. He chaired the committee at the National Council for Science and Technology (now NACOSTI) that developed the first draft of the Kenya Space Policy (2008- 2013) before the exercise was taken over by the office of the Deputy President. He became part of the team that eventually produced the Kenya Space Policy that paved way for the establishment of the Kenya Space Agency in 2017.

His research interests have been in the field of astrophysics and space physics, where he has supervised a number of Master's and doctoral students, the latest being Mr Awuor Ochieng Adero, who will be graduating with a Ph.D. in Space Physics, here at TUK in 2019. He won a United Nations Office for Outer Space Affairs



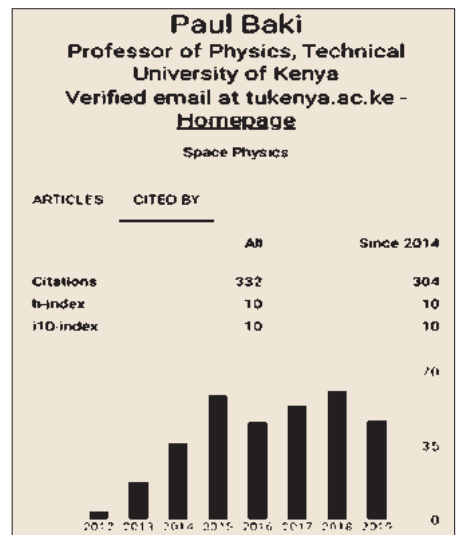
*Prof. Paul Baki, PhD, FKNAS, Academic Team Leader*

(UNOOSA) project award in Human Space Technology, a feat which made TU-K become one of the only two universities in Africa to receive a specialized equipment for human space research. Some of his research interests include: studies using a multi-instrument approach for Space weather monitoring its impact on technological systems, geo-magnetically-induced currents effects on power grid in Kenya, among others. He has over 60 publications to his credit, most of which are in high impact peer reviewed journals and book publications.

Recently, together with other scholars from both TU-K and other universities, Baki a professor of Physics has been the anchorman for a project that will soon the star HD 83443 and its exoplanet HD83443b given names of Kenyan origin using a local dialect. The announcement of the new names will be made by the International Astronomical Union (IAU) before the end of 2019. Prof. Baki is currently consulting for Thales East Africa, a branch of the Thales Alenia Space of France.



*Prof. Paul Baki (left) , Prof. Peter Wilkinson, Dr. Althea Wilkinson (front left) and Radio Astronomy trainees during a visit to Longonot Satellite Earth Communication Station.*



# TU-K fraternity watch Mercury as it passes in front of the Sun

*As IAU set to give new planet a Kenyan name.*



*The VC, Prof. Francis Aduol prepares to view the transition of planet Mercury using an 8-inch digital celestron telescope.*

On Monday the 11<sup>th</sup> of November 2019, planet Mercury, which is closest to the Sun, appeared in the sky like the crescent of the moon. This spectacular event was visible from all parts of Africa from between 1.00 pm to 4 pm. The Department of Astronomy & Space Science hosted TU-K

fraternity led by the Vice-Chancellor, Prof Francis Aduol, in viewing the phenomenon through an 8-inch digital Celestron telescope owned by the Department. The event was hosted at the Main Car Park.

A day later, the Academic Team Leader, Department of Astronomy & Space Science, Prof Paul Baki, led other experts and students in voting for the proposed local names of the Star HD 83443 (a G- type star) and its exoplanet HD 83443b . The star, which is yellowish in colour is visible from Kenya and so is its exoplanet ,a gas giant. The star and its exoplanet were discovered in 2002. The IAU invited Kenya to give local names to the star and its orbiting exoplanet.

The team that worked on the naming included: Prof. Paul Baki - TUK, Dr. Naftali Kimani- KU, Dr. Geoffrey Okengo-UoN, Mr Calvince Juma- TUK, Mr Martin Mutie- TUK (P.D. student)/Chuka University, Ms Susan Murabana- CEO Travelling Telescope and Mr Moses Langa -TUK

A total of 13 names in local dialects were submitted for the star and a similar number for the exoplanet and at the end of the voting exercise the following three sets of names made it to the top three:

1. Star: Kalausi ( Strong whirl wind) - Exoplanet: Buru (dust)
2. Star: Shujaa (here) - Exoplanet: Ngao (shield)
3. Star: Entinganya (queen bee) - Exoplanet: Enchoke (bee)



*The VC Prof. Francis Aduol chats with Radio astronomers, Dr. Althea Wilkinson from University of Manchester in the UK, as Prof. Baki looks on.*



These names have been submitted to the International Astronomical Union (IAU), the highest known professional body of astronomers established in 1919. The IAU will select one of these pairs of names and make the final announcement in December 2019 from its headquarters in France. The star and its exoplanet will hence forth be referred to using their scientific or Kenyan names.

The 5<sup>th</sup> cohort of the Developing Africa with Radio Astronomy (DARA) training programme took place from 4<sup>th</sup> to 15<sup>th</sup> November, 2019 at the Technical University of Kenya under the tutelage of Prof. Peter Wilkinson and Dr. Althea Wilkinson of the University of Manchester (UK).

### Expert explanation

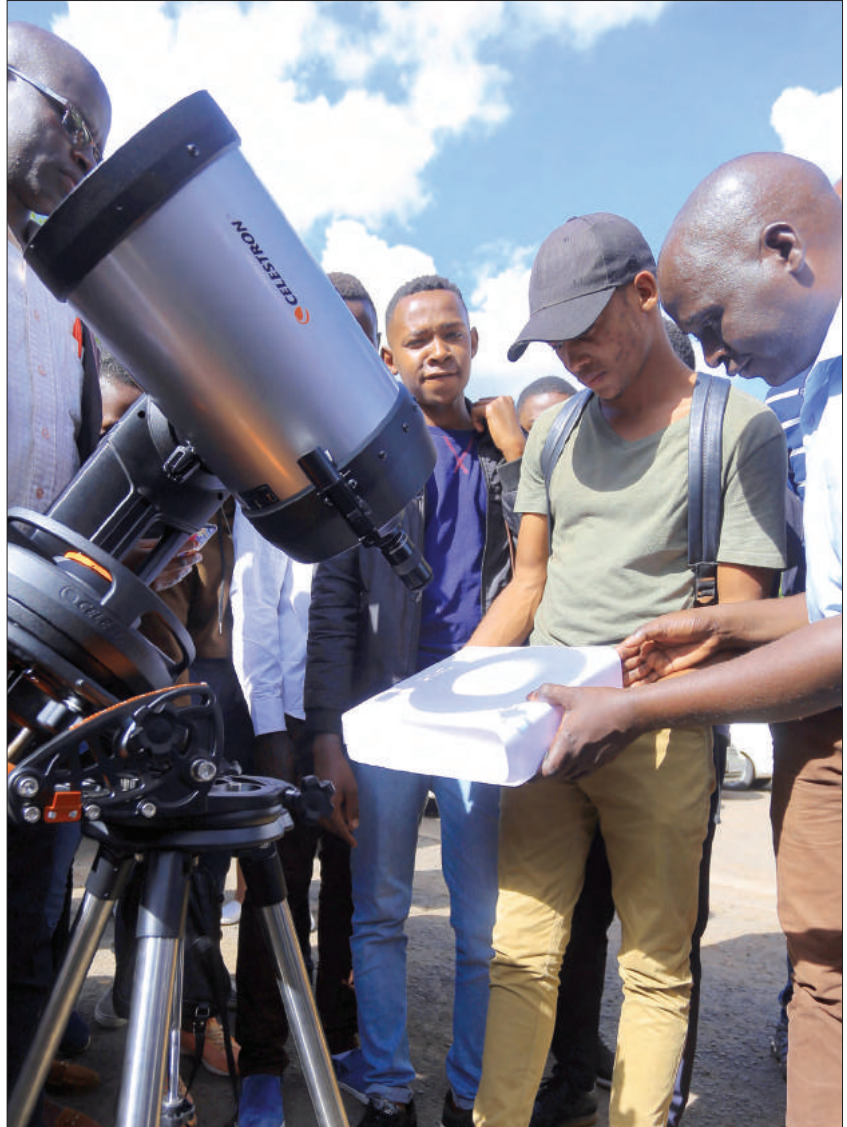
Mercury began its journey across the Sun at 7:35 a.m. EST (1235 GMT), and the entire transit took roughly 5 and a half hours, ending at 1:04 p.m. EST (1804 GMT), according to NASA.

The planet looked like a tiny, traveling blemish on the sun's face as it passed in front of the Sun. The transiting world was very small that skywatchers needed special gear – telescopes or binoculars equipped with protective solar filters - to see it.

Mercury and Venus are the only planets that can pass in front of, or transit, the Sun as seen from Earth, because their orbits are between the Sun and Earth's orbit. Mercury's average distance from the Sun is 35,983,095 miles (57,909,175 kilometers), or about 30% of the average distance between the Earth and the Sun.

Transits are rare events. From Earth, Mercury can be seen moving across the Sun's face about 13 times every hundred years, on average. For a transit to occur, Mercury's got to be in the right place at the right time.

– NASA



*Department of Astronomy and Space Science Researchers and students observe Planet Mercury using an 8-inch Digital Celestron telescope as it transits face of the Sun and the Earth disc.*



*Planet Mercury transition in front of the Sun is observed using an 8-inch Digital Celestron telescope.*

# TU-K goes digital in student management

TU-K has become the first local institution of higher learning to adopt a digital system of admission of students.

And to strengthen the process, the University has partnered with Kenya Commercial Bank to issue students with Smart Cards to be used both as a student Identity Card as well as an ATM card. Over 11,500 students have been issued with the smart cards, which indicates a 97 per cent success of the university student soft record initiative.

This development means the university has a soft form of record for all students that joined this year. The aim of this initiative is to create a sustained student record system for easy access of their academic progression and information.

The University's Senior Assistant Registrar, Students Recruitment and Admissions, Mr Patrick Mathagu, said this was a major step by the University to control impersonation and use of fake documents saying employers will now access records of their prospective employees from the University in real time.

Away from paper work, the system has also enhanced quality admission procedures by ensuring only qualified students get admission to pursue their programmes of choice contrary to the previous procedures which were less effective and tedious.

"With the adoption of this system, this year's first years joined the university quietly and began classes without anybody noticing as compared to the previous exercises which were marred by long queues, commotion



*VC Prof. Francis Aduol (front row centre) when he hosted officers from Higher Education Loans Board and Kenya Commercial Bank. He is accompanied by DVC-ARS Prof. Paul Shiundu, senior university staff and staff from university's Student Recruitment and Admissions.*

and time wastage. The manual system would take a week to complete student admission and registration but this year's procedure was seamless," said Mathagu.

He commended the Directorate of Information Communications Technology (ICT) for creating the system and for ensuring it was adopted appropriately for the effective service delivery, urging the directorate to come up with more solutions to University's activities/processes.

He added that the new technology is effective as the student's current data will be availed through the system adding that this ensures there will be no student who will be allowed to graduate unless his name would be in the TU-K system. He said the technology consistently captured the student academic progress from first year through to his final year of study.

On the smart card, Mathagu said the facility was designed with several

wallets to enable the students to manage their financial obligations. He said the smart card has two active wallets namely the tuition and the student upkeep wallets. This means money designed for fees would not be misappropriated by the student other than paying fees. Parents will also have the option to deposit upkeep money into their children's accounts. Other provisions of the smart card include the buying of goods and services.

Mr. Mathagu said this technology was a milestone by the University to address cases of students misappropriating money received from Higher Education Loans Board (HELB) to engage in betting with the aim of getting more money. Betting has resulted in the students losing the money thus increasing cases of the students dropping out and, in some cases, suicide.



*Kenya Commercial Bank Product Officer Mr Duncan Otieno, VC Prof. Francis Aduol, KCB Senior Relationship Manager, Mr David Kemei, DVC Prof. Paul Shiundu, Senior Assistant Registrar, Students Recruitment and Admission Mr Patrick Mathagu and University Registrar Academic Dr. Hesbon Nyagowa when the team from KCB met University Management regarding the introduction of the new digital admission system.*



*Students Recruitment and Admissions members of staff attend to students.*

# Varsities, research centres to benefit from science & tech centre

TU-K and the International Science & Technology Centre (ISTC) will soon sign an MoU to foster nuclear science research.

The Centre is an intergovernmental organisation that uses science and technology engagement and cooperation to promote international security and foster economic growth through innovation.

During a meeting that was held in Nairobi recently attracted the National Commission for Science, Technology and Innovation (NACOSTI), the Technical University of Kenya (TU-K), University of Nairobi (UoN) and other stakeholders in nuclear science, the team said the institution was seeking partnership with Kenya as the pioneer country in the Africa.

According to Deputy Head of the unit of Nuclear Safety of the European Commission, Mr Eddie Maier, the experts were in Kenya to share some experiences and observations.

"We are a centre of excellence while Kenya is a leader in the region. That is the reason we are in the country to start good relations and seek more collaborations. We want Kenya to be a leader and one of ISTC centres in Africa that will connect to the rest of the countries in the region," said Mr Eddie.

He reiterated that ISTC had demonstrated it had good means and tools to invest and train people in nuclear science. "The scientists in our countries see it important to share some information and network too. When you venture into nuclear energy, there must be a security aspect to be considered from the beginning, and that will make part of our conversation," he explained.

He however noted that Kenya's biggest challenge remains with neighbouring countries that harbour militants who were a security threat.

In Kenya, ISTC will be involved in capacity building, training of staff and sharing the experiences to help them take little time than they did in the past, because of technology advancements.



Representatives from various institutions after the conference on ICT.

The Secretary Administrative, University Education and Research in the Ministry of Education, Mr Peter Okwanyo, said that nuclear power was not a new issue in the country, and that the government was looking for ways of partnering for not only the benefit of the country but the region.

As a Ministry, we have decided to

**"The best way to work in Kenya is to invest in people. We are speaking with the Kenyan Government and now it will become vocal forces as we also network in the region,"**

—Eddie Maier.

be in partnership so that we become members and thereby benefit more," he said.

He promised that the Government was going to fast track the idea of becoming members as talks were at an advanced stage to begin the programmes.

"Our target is to involve institutions among them universities, colleges, research stations and ministries such as Ministry of Agriculture and Energy working together," he noted

Pauline Mulongo, Technical Affairs officer at the Nuclear Power and Energy said nuclear energy it will increase

electricity supply for Kenya Vision 2030 flagship projects.

She pointed that this will help in the diversification of power generation sources for efficient supply.

"It will result in reliable and adequate supply of electricity at reasonable prices," she said and added that National and Economic Social Council in 2010 recommended inclusion of nuclear power in the country's energy mix.

"The best way to work in Kenya is to invest in people. We are speaking with the Kenyan Government as we also network in the region," added Mr Eddie. They explained that sharing with scientific experts ensures the nuclear energy gains all that is required and the safety that is demanded.

The participants were drawn from academia, research and development institutes, radiation service providers, health institutions, nuclear facilities and regulatory bodies. They shared experiences, exchanged ideas and built networks on issues related to safe application of nuclear science and technology. The theme of the summit was, *Nuclear for a Sustainable future*. The event focused on three thematic areas such as nuclear powering Africa, radiation protection and safety culture, and application of nuclear science and technology for a sustainable future.

# It's a new dawn as TU-K implements new Organisational Structure

The University has started to implement the new Organisational Structure as approved by the Council in September 2019.

In the new structure, the names of the divisions headed by Deputy Vice-Chancellors have changed. The division of Academic, Research and Students has now changed to Academic and Student Affairs (ASA). Administration, Planning and Infrastructure (API) and Technology, Innovation and Partnerships (TIP) have been scrapped and in their place, the divisions of Institutional Advancement and Enterprise (IAE), and Research and Technology Development (RTD) have been created.

The functions formerly performed by the DVC - API have been moved to the new office of the University Registrar/Chief Administrative Officer who will be in charge of Infrastructure and Administrative Services (IAS), comprising of Infrastructure, Health, Administration and Human Resource Management.

The University's plan to establish a College of Technology is now taking shape after the creation of the position of Principal was adopted by the Council and introduced in the new Organizational Structure. When the Principal is appointed, he/she will be expected to champion the creation of the College in terms of capital development and assembling of the human resources required for its effective operations.

The Faculty of Engineering Sciences and Technology (FEST) has been renamed Faculty of Engineering and The Built Environment (FEBE). However, the Faculty of Applied Sciences and Technology (FAST) and the Faculty of Social Sciences and Technology (FSST) remain unchanged.

The University has created the positions of Governance and University Secretariat (GUS) to be headed by the University Secretary and Chief Legal Officer, and Financial and Accounting Services (FAS) to be headed by the



*Prof. Francis Aduol, Vice-Chancellor*



*Prof. Paul Shiundu, DVC-ASA*

University Bursar and Chief Financial Officer.

According to the new structure, the position of Head of Departments (HoD) has been scrapped. The departments will be guided by Academic Team Leaders while administrative matters will be handled by the respective Schools headed by Directors.

Some functions of the existing

administrative directorates have been shifted to various divisions in line with the new Organisational Structure.

Consequently, the Vice-Chancellor, Prof Francis Aduol has appointed directors of Schools and Academic Units. A number of new directors have been appointed while others have been retained and re-designated.

**Below is the full list of the appointments:**

TOP MANAGEMENT AND ACADEMIC DIRECTORS AS AT 1 <sup>ST</sup> NOVEMBER 2019		
No.	Name	Designation
1	Prof. Dr.-Ing Francis W. O. Aduol	Vice-Chancellor
2	Prof. Paul M. Shiundu	Deputy Vice-Chancellor, Academic and Student Affairs
3	Prof. Francis Gatheri	Executive Dean, Faculty of Applied Sciences and Technology
4	Prof. Peter Matu	Executive Dean, Faculty of Social Sciences and Technology
5	Prof. Dr.-Ing. Edwin Ataro	Executive Dean, Faculty of Engineering and the Built Environment
6	Prof. Bernard Odera	Director, School of Mechanical and Manufacturing Engineering
7	Prof. Stephen Musyoki	Director, School of Electrical and Electronic Engineering
8	Prof. Jason Mochache	Director, School of Architecture and Spatial Planning
9	Prof. Patrick Ogao	Director, School of Surveying and Geospatial Sciences
10	Prof. David Koteng	Director, School of Civil and Resource Engineering
11	Prof. Sylvester Masu	Director, School of Construction and Property Studies
12	Prof. Cleophas Maende	Director, School of Chemical and Biological Systems Engineering
13	Prof. Faustin Ondore	Director, School of Aerospace and Aviation Engineering
14	Prof. Thomas Onyango	Director, School of Mathematics and Actuarial Sciences
15	Prof. George Amolo	Director, School of Physics and Earth Sciences
16	Prof. Dorcas Yole	Director, School of Biological and Life Sciences
17	Prof. Isaac Orina	Director, School of Health and Biomedical Sciences
18	Prof. John P. Odoch-Pido	Director, School of Creative Arts and Media
19	Prof. Tom Kwanya	Director, School of Information and Social Studies
20	Prof. Richard Makopondo	Director, School of Hospitality and Human Ecology
21	Prof. Fiona Mbai	Director, Directorate of Research and Knowledge Exchange
22	Prof. Dominic Konditi	Director, Centre for Open and Lifelong Education
23	Prof. Joseph Lalah	Director, School of Graduate and Advanced Studies
24	Prof. Florence Oloo	Director, Directorate of Academic Quality and Standards
25	Dr. Luke Olang	Ag Director, Centre for Intergrated Water Resources
26	Prof. Daniel Orwenjo	Director, Centre for Language and Communication
27	Prof. Omondi Oketch	Dean of Students
28	Dr. Geoffrey Otieno	Ag. Director, School of Chemistry and Material Science
29	Dr. Selasio Kiura	Ag. Director, School of Computing and Information Technologies
30	Dr. Elyjoy Micheni	Ag. Director, School of Business and Management Studies

# Varsity Appoints Academic Team Leaders

S/No.	NAME	DESIGNATION
<b>FACULTY OF APPLIED SCIENCES AND TECHNOLOGY (FAST)</b>		
<b>SCHOOL OF BIOLOGICAL AND LIFE SCIENCES (SBLs)</b>		
1.	Dr. Gathinji Mwaniki	Department of Ecology and Conservation Biology
2.	Dr. Susan Imbahale	Department of Applied and Technical Biology
3.	Dr. Peris Amwayi	Department of Biochemistry and Biotechnology
4.	Dr. Mercy Mwaniki	Department of Food Science and Technology
<b>SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY (SCIT)</b>		
1.	Dr. Samson Njuki	Department of Computer Science and Informatics
2.	Dr. Winston Ojenge	Department of Computational Science and Engineering
3.	Mr. Kennedy Rono	Department of Computer Communication and Networks
4.	Mr. Moses Kane	Department of Multimedia and Digital Technologies
<b>SCHOOL OF CHEMICAL SCIENCE AND TECHNOLOGY (SCST)</b>		
1.	Prof. Florence Oloo	Department of Physical and Materials Chemistry
2.	Prof. Paul Shiundu	Department of Industrial and Applied Chemistry
3.	Prof. Joseph Lalah	Department of Geochemistry and Environmental Chemistry
4.	Dr. Clare Muhangi	Department of Pharmaceutical and Medicinal Chemistry
<b>SCHOOL OF HEALTH AND BIOMEDICAL SCIENCES (SHBS)</b>		
1.	Dr. Naomi Waiganjo	Department of Biomedical Sciences and Technology
2.	Prof. Isaac Orina	Department of Pharmaceutical Sciences and Technology
3.	Dr. Francis Oguya	Department of Health Systems Management and Public Health
4.	Dr. Judith Waswa	Department of Human Nutrition and Dietetics
<b>SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCE (SMAS)</b>		
1.	Dr. Grace Gachigua	Department of Industrial and Engineering Mathematics
2.	Dr. Ben Obiero	Department of Pure and Applied Mathematics
3.	Dr. Pius Kihara	Department of Financial and Actuarial Mathematics
4.	Dr. Levi Mbugua	Department of Statistics and Computational Mathematics
<b>SCHOOL OF PHYSICS AND EARTH SCIENCES (SPES)</b>		
1.	Prof. Michael Muia	Department of Fundamental and Theoretical Physics
2.	Prof. Maxwell Odote	Department of Technical and Applied Physics
3.	Dr. Lewis Sitoki	Department of Geoscience and the Environment
4.	Prof. Paul Baki	Department of Astronomy and Space Science
<b>CENTRE FOR EARTH SYSTEM AND SPACE SCIENCES (CESSS)</b>		
1.	Prof. Jayanti Patel	Centre for Earth and Planetary Sciences
<b>CENTRE FOR INTEGRATED WATER RESOURCES MANAGEMENT (CIWRM)</b>		
1.	Dr. Ronald Sungu	Department of Water Governance and Sustainability
2.	Dr. Lydia Gachahi	Department of Water Resources planning and Management
3.	Dr. Luke Olang	Department of Appropriate Water Resource Technologies
4.	Dr. Austin Aluoch	Department of Water Quality management and Monitoring

<b>FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT (FEBE)</b>		
<b>SCHOOL OF ARCHITECTURE AND SPATIAL PLANNING (SASP)</b>		
1.	Arch. Paul Mpungu	Department of Landscape and Interior Architecture .
2.	Dr. Peter Makachia	Department of Urban Design and Development
3.	Dr. Lawrence Esho	Department of Spatial Planning and Design
4.	Dr. Joseph Kedogo	Department of Architecture and Building Science
<b>SCHOOL OF AEROSPACE AND VEHICLE ENGINEERING (SAVE)</b>		
1.	Prof. Faustin Ondore	Department of Aeronautical and Aircraft Engineering
<b>SCHOOL OF CHEMICAL AND BIOLOGICAL SYSTEMS ENGINEERING (SCBSE)</b>		
1.	Prof. Lawrence Gumbe	Department of Biomedical and Healthcare Engineering
2.	Dr. Bilha Gitonga	Department of Chemical and Process Engineering
3.	Dr. Luke Olang	Department of Biosystems and Environmental Engineering
4.	Prof. Cleophas Maende	Department of Food and Bioprocess Engineering

<b>SCHOOL OF CONSTRUCTION AND PROPERTY STUDIES (SCPS)</b>		
1.	Prof. Sylvester Masu	Department of Construction Economics and Management
2.	Dr. Sarah Gitau	Department of Real Estate and Property Management
3.	Dr. Omukaga Panyako	Department of Building Construction and Technology
4.	Dr. Lucy Nyabwengi	Department of Building Surveying and Management
5.	Prof. George Kingoria	Department of Spatial and Regional Economics
<b>SCHOOL OF CIVIL AND RESOURCE ENGINEERING (SCRE)</b>		
1.	Prof. David Koteng	Department of Structural and Construction Engineering
2.	Prof. George Thumbi	Department of Water and Environmental Engineering
<b>SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING (SEEE)</b>		
1.	Prof. Dominic Konditi	Department of Electronic and Computer Engineering
2.	Prof. Stephen Musyoki	Department of Control and Automation Engineering
3.	Prof. Robert Akello	Department of Telecommunications and Information Engineering
4.	Prof. Dr.-Ing. Edwin Ataro	Department of Energy and Power Engineering
<b>SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING (SMME)</b>		
1.	Prof. Bernard Odera	Department of Machines and Engineering Design
2.	Prof. Reuben Marwanga	Department of Industrial and Production Engineering
3.	Prof. Stephen Kionga-Kamau	Department of Thermodynamics and Fluid Mechanics
4.	Prof. Alex Muumbo	Department of Metallurgy and Materials Engineering
<b>SCHOOL OF SURVEYING AND GEOSPATIAL SCIENCES (SSGS)</b>		
1.	Prof. Gordon Wayumba	Department of Geomatics and Land Management
2.	Prof. Dr.-Ing. F. W. O. Adul	Department of Geodetic Science and Navigation
3.	Prof. Hussein Farah	Department of Geoinformation and Earth Observation
4.	Dr. Jacinta Kimuyu	Department of Geography and Spatial Science

<b>FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY (FSST)</b>		
<b>SCHOOL OF BUSINESS AND MANAGEMENT STUDIES (SBMS)</b>		
1.	Dr. Phares Ochola	Department of Management Science and Technology
2.	Dr. Benson Ateng'	Department of Economics and Resource Management
3.	Dr. Headmound Okari	Department of Business Administration and Entrepreneurship
4.	Dr. Jared Abong'o	Department of Accounting and Finance
<b>SCHOOL OF CREATIVE ARTS AND MEDIA (SCAM)</b>		
1.	Dr. Joyce Omwoha	Department of Journalism and Media Studies
2.	Dr. Onyango Oketch	Department of Visual Arts and Photography
3.	Dr. Mary-Clare Kidenda	Department of Design and Creative Media
4.	Dr. James Mutuku	Department of Music and Performing Arts
<b>SCHOOL OF HOSPITALITY AND HUMAN ECOLOGY (SHHE)</b>		
1.	Dr. Bonface Kihima	Department of Hospitality and Leisure Studies
2.	Dr. Selina Omollo	Department of Food and Consumer Studies
3.	Dr. Lucy Ciera	Department of Fashion, Clothing and Textiles
4.	Dr. John Ng'ang'a	Department of Psychology and Human Development
<b>SCHOOL OF INFORMATION AND SOCIAL STUDIES (SISS)</b>		
1.	Prof. Tom Kwanya	Department of Information and Library Sciences
2.	Dr. Eric Nyanjom	Department of Government and Legal Studies
3.	Prof. Peter Matu	Department of Linguistics and Literacy Studies
4.	Dr. Theophilus Chando	Department of Philosophy and Liberal Studies
<b>CENTRE FOR SCIENCE AND TECHNOLOGY STUDIES (CSTS)</b>		
1.	Dr. Arun Datta	Department of Science and Technology in Society

# Aeronautical students tour JKIA and Wilson airports

The Technical University of Kenya (TU-K) Aerospace and Aviation engineering students recently toured the Jomo Kenyatta International Airport (JKIA) in an event aimed at exposing them to the practical orientations of the industry.

The students were received by the Kenya Airways (KQ) Ground Flight Safety Manager, Mr Rex. Munyao and Quality and Standards Deputy Manager, Mr Joseph Achote. The students were accorded a rare opportunity of touring the airside. According to KQ Quality and Standards Deputy Manager Mr Joseph Achote, such an occasion has never been witnessed in a period of fifteen (15) years. He said, "You should therefore feel privileged and honoured to be accorded an opportunity to visit the airside."

Led by Senior Technologist, Mr Jackton Agolla, accompanied by lecturers Mr Edward Kibe, Hesborn Arori and Jacqueline Munene, the students toured different places and were taken through various types of aircrafts parked at Apron 1. The students later on proceeded to Apron 2, where they learnt about aircraft maximum take offs, aircraft weight and maintenance.

The students had the rare opportunity to see and learn about KQ's biggest passenger aircraft, a Jumbo Jet (B747-300) with four engines and ten undercarriages.



*Students being taken through sections of aircraft operations and maintenance procedures.*

Under the supervision of two senior engineers, the students boarded an aircraft by Safe Air and had a view of the avionics. Mr Achote took them through the refueling process using hydrant pit valve system and pressurization. The tour covered the entire terminals including Terminal One-Popularly known

as Kenya Airways -(KQ) terminal, the VIP Lounge and ATC Tower.

The students were also taken towards the remote Apron 3, where VIPs are handled. This is the apron from where the then President of the United States of America Barack Obama and Pope Francis were received when they visited Kenya.

Earlier on, First Year Aerospace & Aviation Engineering students toured Wilson Airport where they got a feel of various aviation procedures in the industry. The tour is a routine practice by the University aimed at exposing students to the industry before they commence their studies.

**The students had the rare opportunity to see and learn about KQ's biggest passenger aircraft, a Jumbo Jet (B747-300) with four engines and ten undercarriages.**



*TU-K Aerospace and Aviation Engineering students pose for a picture with staff and technical and training teams from various hangars during their tour of Jomo Kenyatta International Airport (JKIA).*

# TU-K to link with Inner Mongolia college



Inner Mongolia Vocational Technical College delegation (left) during a meeting chaired by DVC, Prof. Paul Shiundu.

Inner Mongolia Vocational Technical College of Mechanical and Electrical, is keen on establishing an academic linkage with the Technical University of Kenya. This was disclosed recently by the delegation that visited the university.

Among the envisaged areas of collaboration include; training, research and capacity building. It is proposed that the second phase of collaboration will take three years. The two institutions will sign a detailed collaboration agreement with clear responsibilities for each party.

Deputy Vice-Chancellor in charge of Academic and Student Affairs (ASA) Prof. Paul Shiundu, who received the delegation on behalf of the Vice-Chancellor, noted that the visit was very important to the University. He informed the delegation that TU-K was looking forward to the linkage.

"We would like to forge partnerships both locally and Internationally. The collaboration with Inner Mongolia, is a great opportunity for us," said Prof Shiundu.

Present during the event were; Prof. Edwin Ataro, Executive Dean Faculty of Engineering and Built Environment (FEBE), Prof. Maina Matu, Executive Dean, Faculty of Social Sciences and Technology (FSST), Prof. George Amollo, representing Executive Dean, Faculty of Applied Sciences and Technology (FAST) and Director, Technical and Vocational Education and Training ( TVET), Mr C.T. Akumu Owuor.

Others were; Mr Li Wenbo, Dean of students, Inner Mongolia Vocational College, Ms Lin Ling, Deputy Dean,

Department of Electronics, Inner Mongolia Vocational College, Ms Robin Zhu, Project Manager, AVIC -International Project Engineering Company, Mr Golden Yang AVIC international , Mr Tony Sun, AVIC International and Mr Nicholas Omenya, AVIC International.

**"We would like to forge partnerships both locally and Internationally."**

– Prof. Paul Shiundu

Prof. Ataro said the collaboration will offer training, research and building capacity that are key consideration of a university.

Prof. Amollo noted that China had made strides in technology, research and training in various fields therefore Kenya could borrow a leaf. He hoped that the project will open a window for more

collaboration in applied and fundamental research.

Mr. Akumu, hoped that the new program shall address the gaps left out by AVIC project 1 and ensure that the machines and equipment are used effectively. He said, "The initiative will help us realize what we have not. We have the equipment but the staff and operators are not trained on methods of spraying and maintaining them."

He added that the collaboration is coming at the right time when TU-K is in the process of establishing a TVET College that will offer practically oriented courses.

Ms. Lin Ling thanked the University for hosting her delegation and showing willingness for collaboration. She hoped that TU-K will provide space where the project shall be hosted and pledged that most modern and advanced technologies shall be tried in the new project.



A delegation from Inner Mongolia Vocational Technical College of Mechanical and Electrical, led by Mr Li Wenbo, Dean of students, poses for a photo with TU-K senior staff led by Prof. Paul Shiundu

## PICTORIAL



Hotel and Restaurant Management finalist students Teresia Gichamba (right), International Relations and Diplomacy finalist student Irene Jerop (2<sup>nd</sup> right) and Audrey Misikho Nakatama (3<sup>rd</sup> Right) pose for a picture with French Education officers during the official launch of 'English Language Assistants from Kenya' Programme.



Amb. Rémi Maréchaux, Africa and Indian Ocean Director at the Ministry for Europe and Foreign Affairs, in France, with the three TU-K students pose for a group photo.



Participants during the official launch of 'English Language Assistants from Kenya' programme. The programme will see 59 Kenyan university students who have at least completed second year studies teach English language in French primary and high schools. TU-K has sent three students.

## DR. KODHEK COMPLETES STANCHART MARATHON IN 2 HOURS 15 MINUTES

Dr Arwings Kodhek participated in the 2019 Stanchart Nairobi Marathon. He ran the Half Marathon category and completed the 21 kilometre race in 2 hours 15 minutes. This was no mean achievement for the 50-year-old Director of University Health and Wellness.

"It was a tough marathon. I gave a good account of myself against a pack of elite athletes and hundreds of amateurs," said Dr Kodhek. He said he will continue running and doing physical exercises until he reaches 70 years, God willing. "Experience has enabled me to know the right diet to take before major events such as marathon. I have also learnt to run my own race at my own pace because if I try to compete with others, I can easily give up and fail to accomplish my mission. This is the secret to my impressive performance," Kodhek told TUKNEWS.



University Health and Wellness Services Director, Dr. Arwings Kodhek (left) and Nursing Officer Isaac Mosongo (centre) who participated in the 2019 Standard Chartered Marathon. They set a good example of keeping fit as a vital health promotion measure.



# TU-K CULTURE WEEK

Pictures By: William Obura



The competing models on stage



Event Judges



University students choir members perform during Culture Week opening ceremony.



VC Prof. Francis Aduol flanked by DVC Prof. Paul Shiundu, Students Support Services Director Prof. Omondi Oketch, SATUK Student Leader Paul Karanja view memorable images displayed during the Culture Week.



Winners: Mr TU-K, Akoko Junior and Miss TU-K, Linet Kinywa.



Eliud Sibuur (right), 4<sup>th</sup> year Bachelor of Technology, Mechanical Engineering student take the VC Prof. Francis Aduol through his project; Automatic Hydrodic Temperature Controller. This innovation automatically adjust environment temperatures using flow of cold or hot water. The system purely uses solar power to run.

# SATUK's Ms Okola bid to keep girls in school

Student Association of the Technical University of Kenya (SATUK) Deputy Chairperson Ms Veronica Okola has taken up an initiative to ensure underprivileged girls stay in school during their menstrual cycle.

This is through a campaign dubbed 'Keep a Girl in School', that started in June this year.

This campaign aims to improve female hygiene coupled with sanitation by providing sanitary towels and to stop ridicule by giving young girls their dignity back, to reduce infections amongst women and girls and to increase attendance in school.

In her bid to enrich girls with the knowledge on taking care of themselves during their menses, Ms Okola has spearheaded mentorship programs among the schools she has visited together with the support of her team. She has collaborated with the Student President of The Technical University of Mombasa (TUM), and the President of Gender Affairs at Kenyatta University (KU).

During the visits, the students are taught about menstrual hygiene, sexuality, love talk, how to use pads correctly, peer to peer talk and introduced to the reusable type of sanitary towels especially girls in the rural areas. The issue of drug and substance abuse is also among the

topics she likes speak about on when mentoring students.

The team recently visited Rarieda Primary School and Lang'ata Primary School in Nairobi. Ms Okola has managed to get respective area Members of Parliament (MPs) and County Women Representatives involved whenever the team makes these visits.

"During the visit to Lang'ata Primary School, I got to work with the Nairobi County Women representative, Ms Esther Passaris. It was such a motivation given the effort, dedication, and support I got", she Said.

"In TU-K I have received support from several lecturers, Directors of Schools and in particular, Dr. EllyJoy Micheni, the Director of School of Business and Management studies. My friends and colleagues have also joined in the initiative. There are challenges we've encountered especially lack of sponsors but we get our satisfaction knowing that we have created a positive impact on someone's life", Ms Okola explained.

"This group of brilliant students is working hard to break taboo associated with menstruation that has forced many Kenyan school girls to take their own lives and thousands of others miss school each month" Dr. Micheni said.

She added that the team was

devoted to demystify some of the myths and taboos around periods, which were discriminatory against the girl child making her not live her life with confidence as a human being.

Dr. Micheni said that research has pointed out that in some rural areas where schools were often far away from the girls' homes there was a likelihood of the girl student missing school or dropping out completely.

She added that in many developing nations, girls don't attend school during menstruation because they lacked access to sanitary pads or running water.

Other than the *Keep a Girl in School Campaign*, Ms Okola managed to spearhead an innovation fair that took place in July this year, where she collected 18 projects from different students across the various discipline in the institution, and the winner was awarded a laptop, with a tablet and android phone for the second and third run-ups respectively.

Ms Okola is also a member of the Kenya Female Students Leaders and was a part of the movement dubbed *Her life Matters* that saw Kenya's female dignitaries hold night vigils to stop the continued abuse of women and their killings in Kenya.



Ms Veronica Okola (back left standing) joins other students and Members of Parliament during the movement 'Her Life Matters'.

# HRM holds pre-retirement seminar



DVC-ASA, Prof. Paul Shiundu speaks to members of staff set to retire during a three-day seminar

The Office of the Director, Human Resource Management (HRM) hosted a three-day training on Pre-Retirement Planning and Preparedness.

The seminar held in August, was themed *Navigating your path to retirement; planning for a successful exit*, was extended to colleagues who will soon be retiring. It was officially opened by the Deputy Vice-Chancellor, Academics, Research and Students, Prof. Paul Shiundu.

The training forms the basis of the Human Resource mandate of preparing staff for their retirement as well as life after retirement to ensure retirees live a quality life.

The participants learned about employment records and retirement requirements, pre-retirement planning, retirement lifestyle planning, financial management, investing in retirement, emotional and psychological well-being in retirement, effective time management and attitude change in retirement.

Additionally, they got tips on personal finance planning. Further training on stress management and healthy lifestyle in retirement gave the participants increased awareness on looking after their health and the psychological and physical issues in retirement.

“Retirement does not mean it’s the end of a job, it’s going from one stage to another, that is from being employed

to being your own boss” explained Dr. Evans Vidiya, who was the key facilitator of the training. He informed them that once they stepped out, they automatically become ambassadors/senior citizens and the society had expectations for them.

Dr. Vidiya further shared with the participants the many challenges that come with retirement. Some of the ones mentioned were; not getting a monthly salary, income reduction, too much idle time, change of social status, investment options, no welfare facilities, relocation and many others. Therefore, he encouraged them to go into retirement with a mindset of becoming their own bosses by continuing with the line they specialized in.

“Family commitments for retirees become a problem at some point, you discover you don’t know them well. Learn how to deal with your families after retirement because in so doing you avoid stressful situations that can tremendously interfere with your emo-

**“Retirement does not mean it’s the end working. Rather, it’s going from one stage to another, that is from being employed to being your own boss” explained Dr. Evans Vidiya.**

tional, physical and mental wellbeing,” he added.

Dr. Vidiya counseled the staff by pointing out how most people create a plan that will give them “enough” money when they retire. “The problem with that mindset is that it does not account for the unexpected (and often expensive) surprises that happen in life. Some of these surprises can be unforeseen medical costs, unavoidable travel, political ambitions that sometimes are forced onto retirees, unplanned debt (most retirees today still have huge loans with banks and mobile apps), and inflation. So, it is not enough to plan for enough money when you retire; to be safe, you want to have more than enough money.”

An increasing number of people retire every year at different levels. Many of the retirees are not prepared for such a drastic change as they discover that the pension is inadequate. The employer in addition to catering for the employees’ retirement benefits should sensitize them on the need to prepare for retirement early in their careers. This is why TU-K decided to take the initiative and sensitize the staff who are about to retire.

Other facilitators of the seminar included Mr Kihoro Magu, Mr Ben Sanda, Dr. Argwings Kodhek, Mrs. Sabina Ng’ang’a and Mr Bernard Opondo.

# TU-K Student Choir is the best



Members the TU-K Student Choir with the VC, Prof. Francis Aduol, DVC Prof. Paul Shiundu and other senior members of staff at the university when they presented him with a trophy they won during the 2019 National Music festivals.

The Technical University of Kenya (TU-K) Student Choir recently bagged a trophy for being the overall best university choir in all the classes sponsored by the Communications Authority of Kenya (CAK).

The trophy was presented to the Choir by H.E. President Uhuru Kenyatta, at State House, Nakuru.

The Choir's performance at the state concert impressed the Head of State, Education CS Prof. George Magoha and other top government officers and

other dignitaries. The Choir has made a history as the only university choir to be invited to perform a state concert for four consecutive years.

Prior to the award, the Choir had made a sterling performance at the National Music Festivals where it was awarded a trophy for best overall university in the set piece category at the finalists concert. In the same festivals, the TU-K Choir won in nine classes and took second position in three categories. The choir bagged a total of nine trophies

and over 20 merit certificates for their exemplary performance.

Speaking recently when he hosted the members in his office, Vice-Chancellor Prof. Francis Aduol, commended the choir for emerging victorious in the music festivals. "TU-K choir has sent a strong message to other universities. This encourages students to aspire to study music at TU-K. We thank you for making us proud and we will keep on supporting you," he said.

Prof. Aduol said TU-K treasures music which has picked so well despite being viewed as a rare programme. He maintained that he had no regret in introducing the programme at the University.

The VC noted that the University will continue to support the academic dimension by strengthening the teaching of music and development of more programmes in the university's Department of Music and Performing Arts.

"I am glad that students pursuing other programs are interested in music, a demonstration of talents. TU-K is small in terms of physical size and facilities, but big in heritage," he added.



Old and new members of the Executive Board of the International Music Council drawn from all over the world in Paris during the 38<sup>th</sup> General Assembly held in September 2019. Prof. Emily Akuno handed over IMC presidency.

# TU-K choir receives trophy from President

TU-K's student choir has been ranked as the best among of the universities by Kenya Music Festival due to its quality of tone and details in the performance of choral music.

The Choir's Artistic Director and Coordinator over the last four years has been Mr Wycliffe Obiero, who has been working closely with other lecturers in the Department of Music and Performing Arts such as Mr Mukasa Wafula, Mr Andrew Obaga, Dr. James Mutuku and Ms Muthoni Njenga. This year, the choir for the first time included elocution in French and German languages as directed by Dr.

Teresa Otieno and Ms Margaret Gathigia respectively. In the French solo class, the students emerged number one and two, whereas in the German solo class, the students emerged number one. Initially, the University started by participating in small ensemble classes such as duets, trios, quartets and small choir. This year, the



*H.E. President Uhuru Kenyatta present TU-K Choir's Artistic Director and Coordinator, Mr Wycliffe Obiero with a trophy for being the overall best university choir in all the classes. Looking on is the Education Cabinet Secretary, Prof. George Magoha.*

Kenya Music Festival celebrated the 93<sup>rd</sup> edition since its inception, making it the oldest cultural extravaganza in East and Central Africa. The event has had an annual participation of over one hundred and fifty (150) groups at the national level, making it undoubtedly the largest festival in Africa. The festival,

under the auspices of the Ministry of Education, draws participants from primary schools, secondary schools, colleges and universities. Participants are required to showcase their talents through competition in music, dance and elocution in English, French, German and African languages.

## APPOINTMENT

# FEBE gets new Executive Dean

Prof. Edwin O. Ataro has been appointed the Executive Dean, Faculty of Engineering and the Built Environment (FEBE). He takes over from Prof Alex Muumbo whose five-year term ended in May 2019.

Prof. Ataro is a specialist in Optical Fibre Communication Engineering and has research interests in Renewable Energy Studies and ICT. He brings on board over 20 years of experience in academics and management practices having risen through the ranks in Moi University from Graduate Assistant to Associate Professor. He was head of the Department of Electrical and Communication Engineering for seven years before rising to the position of Director of Information and Communication Technology (ICT).

Among his outstanding achievements in society is the initial rolling

out of the massive Government of Kenya Digital Literacy Program (DLP) also branded as Digischool that was initiated in 2015. He was a key member of the team that conceptualized, wrote and won the tender for the first phase of the DLP and played a central role in the project implementation. He is the outgoing Chairman of the Management Board of Kenya Education Network (KENET), a not-for-profit organisation that provides sustainable high speed internet connectivity to Kenyan educational and research institutions.

Prof. Ataro graduated from Moi University with a first class honours degree in Electrical and Communication Engineering before proceeding to the University of Kassel, Germany for his Master's and doctorate degrees in Electrical Communication Engineering. His



*Prof. Edwin O. Ataro*

doctorate research yielded two international patents whose details can be found at the World Intellectual Property Organisation (WIPO) and the German Patent Office. He has published numerous articles in peer-reviewed journals and presented papers in local and international conferences, workshops and seminars.

Localised innovations and understanding of community setups is key in building long-term and sustainable solutions to Water, Sanitation and Hygiene (WaSH) projects, especially in highly urbanizing areas in developing countries.

This was said during a workshop held in Nairobi on November 7<sup>th</sup>, as a culmination of the research carried out between 2016 and 2019 in Nairobi and Kampala targeting low-income settlements who face numerous challenges of water supply and sanitation.

The study aimed at understanding the critical interface between various actors and users of water and the role of technology to driving innovative solutions to WaSH projects and management aids in achieving Millennium Development Goals (MDGs) including access to basic sanitation service by 2030.

During the workshop, 26 local and international experts and scholars in WaSH met in Nairobi to make contributions to better management strategies towards improved and sustainable services to low-income customers.

The participants were drawn from Kenya, Uganda, Tanzania and Sweden including; water and sanitation utilities, local government, the national sector regulator in Kenya, development partners and academia. The workshop was hosted by the Technical University of Kenya (TU-K), The Royal Institute of Technology (KTH) and the Stockholm International Water Institute (SIWI).

The lead workshop conveners from TU-K were; Dr. Lewis Sitoki, (Department

## Local solutions needed for access to water, sanitation



*Some of the researchers making presentation during the workshop.*

of Geo-Science and Environment), Prof. Fiona Mbai, (School of Health Sciences and Technology) and Mr Benard Juma, a PhD candidate (Department of Civil and Construction Engineering).

The project was funded by the Swedish Research Council - FORMAS and carried out by the KTH with partners in East Africa including the TU-K, and Makerere University, Uganda).

The project focused on four case studies including; pre-paid water dispensers (PPDs) in Nairobi and in Kampala, self-read water meters in Nairobi - Jisomee Mita (JM) and Delegated Water Management Model (DWMM) in Naivasha.

The research revealed that public utilities are trying new models of provision of services away from the conventional approaches. The space of unconnected and marginalised areas constitutes a 'critical interface' between the utility and

potential new users, where innovation has to take place.

The study also showed that for an innovation in the 'critical interface' to be successful, it must be adapted to both the local context and the organisational context of the utility.

The study further indicated that innovation process has to include identifying and dealing with misalignment like instances of poor adaptation as well as identification of internal potential conflicts and diversifying the competence base. Participants from Royal Institute of Technology (KTH) were; David Nilsson, the Director of the Water Centre, and also an Associate Professor in History of Science and Technology, Pär Blomkvist, an Associate Professor at the Institute and Researcher at Mälardalen University. Richard Giné, also workshop organiser from SIWI supports the institute in the area of sustainable delivery of WaSH service.

Some of the discussion areas deliberated on during the workshop included innovation needed to achieve the Sustainable Development Goal number six (SDG 6) that calls for universal access to basic sanitation service by 2030. The workshop also examined key issues brought out from the case studies including role of middlemen and ways of cutting through their operations using technologies like Pre-Paid Dispensers (PPD) or self-read meters (JM).

The workshop proposed solutions to misalignments including; working close with communities to reduce vandalism and resistance from users, and to build trust through signing MoU's education and understanding users.



*Experts and scholars in Water, Sanitation and Hygiene (WaSH) joint research project drawn from TU-K, Royal Institute of Technology (KTH) and the Stockholm International Water Institute (SIWI) during a workshop held at Southern Sun Hotel, Nairobi.*

# Sungu obtains PhD in water sciences

TU-K lecturer, Ronald Sungu, has graduated with a PhD in Environmental and Water Sciences from the University of Western Cape, South Africa.

His thesis was based on *An assessment of the influence of water allocation on sustainable water resources management: A case study of the Nyando River Basin of Kenya* where he sought to examine the influence of the current water allocation system on water resources management in the Nyando River Basin. He compared the various sectoral water demands in the basin with the available water resources in order to improve understanding of how water allocation systems work in practice.

The rationale of the study was to facilitate an understanding of the influence of water allocation systems on regional hydrology to form the basis of improving water allocation systems and inform policy formulations to ensure sustained water availability and envi-



Dr. Ronald Sungu

ronmental sustainability in river basins. In that regard, the study would contribute to the on-going global debate on Sustainable Development Goals by exploring ways of realising and improving IWRM strategies and the National targets.

The scholar's discourse was informed by the fact that several river basins in the sub-Saharan region experience water resources management prob-

lems, pointing out that water problems prevalent in the Nyando River Basin for example was due to an ineffective water allocation system and lack of adequate conditions for implementation of sustainable integrated water resources management strategies (IWRM).

And with this behaviour, the study posits, the basin is bedevilled by poor water resources management, inequitable allocation of water among consumers, physical infrastructural deficiencies, inefficient water utilisation, illegal water abstractions, natural resource mismanagement, conflicting and weak institutional roles and lack of stakeholder involvement in water resource management.

The study points out that water legislation in Kenya and elsewhere embraces integrated water resources management principles which should lead to elimination of these problems.

# TU-K don completes PhD in 2 years

A TU-K Technologist, Mary Ahuna, has made history in the University of KwaZulu Natal, South Africa, for completing her PhD in Electronic Engineering within two years.

According to the University, this was a record time and captivating news from a foreign student despite her role as a wife and a mother who has demonstrated great passion for mentoring young people especially girls in embracing Science, Engineering and Technology programmes.

Dr. Ahuna is currently an Electronic Engineering Technologist at TU-K with over 20 years of experience both in engineering workshops and class. She is a member of Institute of Electrical & Electronic Engineering, (IEEE) and Women in Engineering.

She holds a Master of Science in Electronic Engineering and and PhD in the same field both from the University of KwaZulu Natal. She has served as a coordinator of the Robotic Team at the University

between 2008 to 2011. She is also a member of the Advisory Board of the Association of Engineering Students at the Technical University of Kenya.

Her research study investigated the effect of intense rainstorms on wireless link performance. Results of this investigation led to the design of dynamic rain fade mitigation techniques such as the use of a combination of digital data modulation schemes that guarantees and maintains link connectivity and availability during a rain event.

In the study, the back propagation neural network (BPNN) model was also employed to predict the state of the link for decision making in employment of dynamic rain fade mitigation techniques. This prediction model was tested on all rainfall regimes including intense rain storms.

Data used in the study was collected at Howard College, University of KwaZulu Natal,



Mary Ahuna

Durban, South Africa. Further on, the prediction model was tested on a rainfall event data collected over Butare in Rwanda, and the results demonstrated the portability of the proposed prediction model to other regions.

Also, the study examined the frequency of occurrence of rainstorms using the Markov Chain alongside Queueing Theory technique. The results indicated that the model can be useful for the design of site diversity rain fade mitigation techniques.

# Alumni flying TU-K flag high

*The alumni of TU-K and its predecessor institutions- Kenya Polytechnic University College and Kenya Polytechnic, are working in virtually all sectors of the economy. The University is always proud of its former students who have achieved greatness in their chosen fields. The institution consists of alumni from the Kenya Polytechnic, the Kenya Polytechnic University College and currently The Technical University of Kenya. Our alumni network is a unique community of former students who are making a real impact in the world in almost every sphere. They are leaders, influencers, opinion makers and innovators in a myriad of industries ranging from business, academics, government, engineering, the arts, hospitality among others. As an institution, we celebrate many of our outstanding alumni and recognize their notable achievements. Their transformative power is evidenced by their exclusive accomplishments. In this feature, some of our alumni take us through their journeys and experiences from the moment they graduated from this great institution and how they have risen through the ranks to where they are today. They, in addition, share their opinions on how alumni can give back to the institution and leave their mark in the history of TU-K.*

## **Dr. John Onsati:** Chairman of KNEC

Dr. John Onsati went through the Kenya Polytechnic, graduating with an Ordinary Diploma in 1976 and a Higher Diploma in 1984. Between 1976/1977, he further obtained a Technical Teachers' certificate from the same institution. Dr. Onsati was appointed Chairman of the Kenya National Examinations Council in 2019 after serving three years as a member of the KNEC Council. Further to the education he attained at the Technical University, Dr. Onsati, holds a Doctorate degree in Organizational Development and Transformation from Cebu Doctor's University, Philippines and a Master of Science (MSc) degree from Victoria University, Manchester, UK.

According to Dr. Onsati, "Quality tertiary education requires the support of not only institutions and learners, but also alumni, governments, communities, and industry."

The alumni association should assist students to smoothly transit from the institution to the outside world. One of the ways they can do this is through offering internships and job placements to the graduates. The alumni can also donate books and even equipment to an institution. If an alumni association is strong and well-endowed financially, it can also pull off more significant projects like improving the infrastructure of the institution," he adds.



*Dr. John Onsati*



*Mr Malenya Lusimba*

## **Malenya Lusimba:** Bank of Africa - Kenya

Malenya Lusimba joined the Kenya Polytechnic in 1990 and graduated with a Diploma in Information Science (Archives Administration & Records Management) in 1993. Armed with his certificate and the advantage of the mastery of the French language, he was employed at Abercrombie & Kent Limited as a Guest Relations Officer before moving to Urtna-Pec - Nairobi now known as the Africa Union of Broadcasting (AUB) as an Audio Visual Archivist/Librarian where he worked for a decade.

It is during his stint at Urtna-Pec-Nairobi that Malenya realized the importance of the then little known career and decided to go back to the Kenya Polytechnic to advance his studies by

pursuing a Higher Diploma in Information Science. In 2014, he further attained a Bachelor of Technology in Information Studies from the same institution which had then transitioned to the Technical University of Kenya (TU-K). He has since joined Bank of Africa, Kenya where he is the Senior Administration Officer in charge of Records Management & Procurement.

Malenya describes his experience at the Technical University as one that has enabled him to have an advantage in the budding Archives Administration & Records Management field. Most employers have realized the importance of proper archives and records management for the success of organizations and thus professionalism is key.



## Ms. Maryolive Muigai: Music Peripatetic Instructor



Maryolive Muigai

Maryolive fought to have music as her career of choice for a long time. In 2014, Maryolive decided to pursue a degree in Music at the Technical University of Kenya to make her music skills professional. Her relentless pursuit for a career in Music has opened up doors which have helped her excel as a musician. While at the Technical University of Kenya, she got a one-year vocals scholarship at Liverpool Hope University where she got to perform for the Mayor of Liverpool during the Commonwealth celebrations in 2016. She

describes her experience at TU-K as impactful.

“The education I attained has been beneficial to my career.” With the onset of technology, professions have become so diverse hence alumni can guide students on the latest developments in the industry. Furthermore, alumni can offer sound advice from their experiences that can help students to navigate both their academic and professional life.

## Ms. Everlyne Komba: Gender, Governance, Human Rights and Development Expert

Eva, as she's fondly referred to by many, is an International Gender, Governance, Human Rights and Development expert. She has major competencies in matters of gender based violence programming and implementation, public policy formulation and analysis and Research, access to gender justice and is passionate about the eradication of harmful traditional practices, and child protection and gender mainstreaming as well as women empowerment among other areas.



Everlyne Komba

Her career journey begun at the Kenya Polytechnic where she attained a Diploma in Pharmaceutical Technology. After graduating in 2005, Eva enrolled for a bachelor's degree in psychology at Egerton University. She further pursued a Master's degree in Gender, Women and Development Studies at the same institution. In the course of her career, she cites how some of the units from her pharmacy course she undertook at the Kenya Polytechnic are quite useful in her newfound profession.

In March, 2019, Eva took up

a very challenging role as an Executive Director of Dharoor Valley Development Initiative based in Garowe, Puntland, Republic of Somalia, a position she now credits to have greatly contributed to her experience and exposure.

Eva encourages graduates to be dynamic both in and out of the lecture hall. She emphasizes the importance of joining relevant professional networks which include alumni that will enable them gain current and meaningful information on emerging trends and opportunities.

## Dr. George Okwadha: Senior Lecturer, School of Civil and Resource Engineering, the Technical University of Kenya



Dr. George Okwadha

Dr. George Okwadha pursued a Higher Diploma in Construction Engineering, Soil Mechanics (Foundation Engineering Option) from 1989 to 1991 at the then Kenya Polytechnic.

“We were a class of 8 students all working for various Government Ministries and I emerged the best student in this option,” he recalls.

It is this education and training that earned him subject credits to the University of Wisconsin where he graduated in 2003 with two bachelor degrees within a period of 4 years; a BSc. in Civil Engineering and a BSc. in Environmental Science (Magna Cum Laude).

He further attained an MSc. in Environmental Engineering in 2006 and in addition received his PhD in Engineering (Environmental) in 2010 all from the University of Wisconsin-Milwaukee, USA.

Dr. Okwadha is currently a Senior Lecturer at the School of Civil and Resource Engineering, the Technical University of Kenya, a thematic Team Leader, Transport and Traffic Engineering, a Commonwealth Fellow and a reviewer of Association of Commonwealth Universities Engineering Fellowships applications. He is a former Chairman and Director of the School of Infrastructure and Resource Engineering (SIRE). Dr. Okwadha urges the alumni to register as members of the Technical University Alumni Association (TUKAA) and work hand-in-hand with the Alumni Directorate to recruit more members as a way of marketing the University.

### Hon. Eng. Peter Korinko Mositet:

Former Senator Kajiado County

At the age of 19, he was forced to stand up against various injustices he witnessed firsthand in his village. It was from this process that Hon. Mositet's political seed germinated. He was then a first-year student at the then Kenya Polytechnic, where he had enrolled to study Civil Engineering. He successfully completed his studies in 1983 after which he returned to the same institution to pursue a higher national diploma in 1989. Hon. Mositet fully plunged into politics in 1992 after graduating from the Kenya Polytechnic. He later on proceeded to the Jomo Kenyatta University of Agriculture and Technology for a Bachelor of Science degree in Civil Engineering.

Hon. Mositet who describes his journey from humble beginnings as a youth activist to an Engineer in the Ministry of Water and Irrigation where he rose through various ranks in public service. He was eventually elected as the Senator for Kajiado County in 2013. According to Hon. Eng. Mositet,



*Hon. Peter Korinko Mositet*

“universities need to rethink the role of their alumni associations and their agenda. Is it just networking? Where alumni meet for merry or for greater purposes such as fundraising, mentorship or the establishment of a bursary and endowment fund?” he poses. Most universities have alumni associations and clubs which need new ideas to keep them thriving. Institutions can rely on an active alumni association to contribute to this.

### Wycliffe Sikhila Wesonga:

Architect and Canon of the Anglican Church

What many people may not be aware of is that the retired Canon of the Anglican church, Wycliffe Wesonga is an architect and also an alumnus of the Kenya Polytechnic where he pursued a Diploma in Construction and Civil Engineering. Architect Wesonga is credited for being the founder Chairman of the Kenya Polytechnic Students Council (a position he held in 1971) and for being the first ever student to transition to the University of Nairobi.

His desire to study architecture continued to build besides the fact that the Kenya Polytechnic did not offer it then. He therefore enrolled for a diploma in Civil Engineering which was the closest to Architecture and further pursued a higher diploma and also another diploma in Technical Teacher Training at the same institution.

Despite his qualifications, the University of Nairobi only recognized 'A' level qualification as being suitable for admission to a university. This

frustration led him to write a personal letter to the then President, H.E. President Jomo Kenyatta seeking admission to the University of Nairobi to study Architecture. Surprisingly, he received a handwritten response from the President, thus marking his entry into the prestigious institution of higher learning in Kenya. Canon Wesonga graduated with an honours Bachelor of Architecture degree in 1981.

Arch. Wesonga holds the view that alumni can make extraordinary things happen within and beyond the University through being part of the alumni association. Alumni should work together and apply their knowledge, skills and experience to address societal issues in their communities and beyond such as promoting education reforms, improving various relations, and/or establishing programs for needy students. “It is time that we strengthen student-alumni ties for the benefit of our institutions.” says Canon Wesonga

## TUKAA GOING PLACES

The Technical University Alumni Association (TUKAA) was established to connect, inform, serve and engage the University's diverse alumni and friends. The Alumni association brings together graduates of the Kenya Polytechnic, Kenya Polytechnic University College and Technical University of Kenya. One of the Associations objectives is to promote and maintain the history, image, integrity and principles of Technical University of Kenya as an institution of higher learning besides promoting the academic and professional excellence of the University and its Alumni through various initiatives such as mentorship and development.

An alumnus plays a significant role in the development and advancement of the institution because they are our fundraising prospects. It is in this regard that, TUKAA provides a networking platform where alumni can share their experiences and information with fellow alumni spread across the globe enabling them to interact and grow professionally. As a result, alumni can give back to the university through contributing to the association's mentorship program, participating in development projects and in addition playing a key role in the industrial attachment and placement of students.

The association has achieved key milestones worth celebrating. We are currently in the final stages of registering the Alumni association with the Registrar of Societies. We have also registered over 20,000 members in our database and enhanced collaborations and partnerships in a bid to strengthen our mentorship and university - industry partnerships. The Alumni are encouraged to register as members of TUKAA and support its initiatives through registering online via our alumni portal: [alumni.tukenya.ac.ke](http://alumni.tukenya.ac.ke) or by filling in a physical form that can be collected from our office at L21. The office also interacts and engages with alumni through its various social media platforms such as facebook, twitter and LinkedIn and urges alumni to join them so as to interact amongst themselves.

# TU-K's second PhD cohort graduates

In 2018, The Technical University of Kenya, made the first baby step by producing four PhD graduands. This year, during the 7<sup>th</sup> graduation ceremony, nine (9) candidates are set to be conferred with PhD degrees. Here below are the candidates' profiles.

**Julius Njathi Nguku** was registered for his PhD in 2015. His research thesis was titled, "**Socio-demographic and Programmatic Correlates of Sustainable HIV-Protective Behaviours among Adolescent Girls and Young Women aged 15-24 years residing in Mukuru Slums in Nairobi**".

The study was necessitated by the dearth of information on which factors are associated with the practice of sustainable HIV protective behaviours by slum-dwelling young women; and the programme models that are most efficacious for eliciting positive change in the behaviours in the sub-population. Assessment of the HIV protective behaviours practiced by young women who had benefited from three different HIV prevention service delivery models for at least one year before was carried out during the 3-year project funded by Grand Challenges, Canada.

One of the service delivery models is known as "**Bold Idea for Girls (BIG)**" an integrated innovation combining Evidence-based Behavioural Intervention (EBI), gender, life-skills and economic empowerment interventions. This program has been adopted for use nationwide, by the National Aids Control Program. Nguku is the Principal Investigator (PI) for the BIG Program funded by Grand Challenges, Canada, while Prof Fiona Mbai, one of his PhD supervisors, is a Co-PI. So far, three manuscripts have been published from the results of the study. The work has also been presented in three international scientific forums, including the International Aids Society (IAS) Annual Meeting in Paris, France in July, 2019.



Mr Julius Njathi



Mr David Maina

**David Maina Kahando:** Initially Kahando had enrolled for a PhD in Entrepreneurship at Karatina University in 2014. During this period, he successfully completed his course work. In 2015, he transferred his studies to TU-K where he teaches. The title of the thesis was, '**Personality Traits and Cognitive factors on Self-Employment Intentions among Students in Technical and Vocational and Education and Training in Kenya**'. The general objective of this study was to investigate the effect of personality traits and cognitive factors on the relationship between entrepreneurship education and self-employment intentions among TVET students in Kenya. Kahando was the principal researcher, supervised by Dr Esther Mungai and Professor Nixon Muganda. So far, he has published three manuscripts from the results of the study. The finding of this study confirms that compulsory entrepreneurship education course, introduced in TVET Institutions has a major influence in modifying both personality traits and cognitive factors which enhance student' self-employment and motivate them to be self-employed after graduation.

**James Owuor Joram:** His PhD thesis '**Design and Optimisation of Primaquine Loaded Solid Lipid Nanocarrier, Evaluation of its Efficacy, Characterization in Prophylactic Management of P. Falciparum**'.

He dealt with design and optimizing of solid lipid nanocarrier (SLN) for target delivery of an anti-malarial which was shelved for its toxicity. The output of this work included a sustained delivery of up to 400 hours which is exceptional especially for prophylactic drugs. Out of this work, he was a beneficiary of the prestigious award of the 2016 Next Generation Scientist (NGS) Internship Program offered by the Novartis Pharma AG and the University of Basel, in Basel, Switzerland. Under the program he was attached in the topical and parental delivery group and their work has been filed for award of a patent. He has three publications from the work in the Journal of Nanotoxicology and Nanomedicine (JNN). Owuor was supervised Prof. Florence Oloo (TU-K) and Dr. Jeremiah Waweru Gathirwa (Centre Traditional Medicine and Drug Research, Kenya Medical Research Institute).



Mr James Owuor

## PhD GRADUANDS

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Absalom Habil Vugigi Lamka is the first PhD graduand being presented by the Faculty of Engineering and the Built Environment. He was registered for his PhD in Construction Project Management in the Department of Construction Economics and Management, School of Architecture and the Built Environment at TU-K in January 2016 and his thesis was **entitled 'The impacts of resource leveling management practices on construction firms' performance in Kenya; case study of in-situ concrete works by construction firms in Nairobi City County'**. The objective of the study was to establish the impact of resource leveling practices on performance of construction firms in Kenya and propose a performance assessment model that would lead to improved resource utilisation. Absalom has published three research papers from the study. The University appointed supervisors for the doctoral thesis were; Prof. QS. Dr. Sylvester Munguti Masu, The Technical University of Kenya and Dr. QS. Githae Wanyona, Jomo Kenyatta University of Agriculture and Technology.



Mr Absalom Habil



Carolyne Khasoa

Carolyne Khasoa Wasike registered for her PhD in 2015. Her thesis was titled **'Health Food Products as a Tool for Market Growth Among Restaurants in Nairobi City County, Kenya'**. The study was necessitated by the rise in lifestyle disease deaths caused by poor eating habits attributed to the foods in eating outlets. Results of the study that assessed health food products on offer in restaurants and market growth showed a relationship between these two variables. The findings also indicated a shift in eating habits among restaurant-goers from the sake of it to healthy eating. These were influenced by not only presence of this product category on offer in eating outlets but also the increased knowledge on the impact of eating habits on human health. Ms Wasike was the Principal Investigator for the study while Dr. Erick Fwaya and Dr. Dorcus Kigaru, her PhD supervisors, were the co-investigators. So far, three manuscripts have been published from the results of the study.

Grace Akinyi Musa registered for her PhD in 2014. Her research and thesis was titled **'An Empirical Assessment of the Relationship between Introductory Accounting Course and Choice of Accounting Major: Effects of Students Performance and Career Guidance'**. The study was necessitated by the low uptake of Accounting Major amongst the Bachelors' of Commerce students in most universities across the world. This was even after undertaking Introductory Accounting course. This pointed out to a major problem in the delivery of the course given that it was essentially the gateway to the choice of Accounting Major. The multiplier effect of non-mastery of accounting concepts culminated in a mismatch of skills posed by accounting graduates on entry into the job market with the employers' requirements in the business world. So far, three manuscripts have been published in international peer-reviewed journals from the results of the study. Ms Musa was the Principal Researcher and was supervised by Prof. Anne Amadi Ndede (Great Lakes University of Kisumu), Prof. Selefano Odoyo- Head of Accounting, USIU, Dr. Headmound Okari-Academic Team Leader DBAM, TU-K, and Dr. Evans Vidija Sagwa, DBAM, TU-K.



Grace Akinyi



Mr James Nyabuga

James Nyabuga Nyariki enrolled for his PhD in October 2015. His thesis was titled **"The Role of Coenzyme-Q10 in the Regulation of Inflammatory Immune Responses during Experimental Cerebral Malaria in Mice"**. In his study Co-enzyme Q<sub>10</sub> was used owing to its usefulness to treat neurodegenerative diseases, its robust effect in mitigating neuroinflammation, assuage inflammatory gene, antioxidant regimen, reducing toxicity associated with a number of drugs and immune cells and also as a unifying ameliorative factor in pathological phenomenon. The study by Nyariki is an interesting investigation in line with the future directions of adjunctive therapies for Cerebral Malaria treatment. Considering the fact that Cerebral malaria, is a highly dynamic disease and of multifactorial consequence. It may be conceivable therefore, that Coenzyme-Q10 does present a statistically significant role in overall protection against deleterious events associated with cerebral malaria, hence providing insight into a powerful potential translatable therapy according to his study. Nyariki carried his research in the Institute for Medical Microbiology, Immunology and Parasitology (Bonn, Germany) and the Institute of Primate Research (Karen, Kenya) under Prof. Orina Isaac as the lead supervisor. So far three research articles have been published from the study. The work has also been presented in four international scientific fora including the 28th Annual Meeting of the German Society for Parasitology in Berlin, among others.

**Judith Nelima Wasike Milimo.** She enrolled for her PhD in October 2015. Her thesis was titled '*Influence of information technology infrastructure and government policy on the relationship between supply chain process integration and supply chain performance of public universities in Kenya*'. Performance is a contemporary issue that applies to private, public, profit and non-profit organizations. As a result, optimization is central to attainment of any objective. Therefore, emphasis on efficiency, transparency, accountability in the university processes and operations in order to enhance supply chain performance. In turbulent market environments, a flexible information technology infrastructure can instantaneously deliver rapid results and support sustainable growth. IT supports rapid data-driven innovation, knowledge-sharing, and relational coupling with supply chain partners. Information Communication Technology (ICT) impacts both internal process and external integration by increasing the flow of relevant information among process participants by shaping closer supplier and customer relationships. Wasike carried her research in the public universities in Kenya under the supervision of Prof. Maurice Sakwa and Dr. Evans Vidija Sagwa. Three research articles have been published from the study and presented in an international conference.



Judith Nelima



Mr Edward Odhong

**Edward V.O. Odhong.** He registered for his PhD in 2015. His thesis was titled "*Mechanical behaviour of healed rice husks fibre reinforced polypropylene composites*". Current environmental challenges and the need to find a durable alternative material to timber have led to an increased interest in plant fibre reinforced polymer composites. Therefore, this study sought to investigate recovery of mechanical strength of fractured rice husks fibre reinforced polypropylene composite through repair of fractured surfaces by injection of healing agents. Rice husks fibres are among agricultural wastes widely used as reinforcement for polymer matrices to form reinforced composite materials. This is specifically due to short renewable cycle of the rice crop from which the husks are extracted and also high silica content of the husks. Mr Odhong was the principal researcher supervised by Prof. (Eng) Alex M. Muumbo and Prof. (Eng.) Abel N. Mayaka.

## 2019 Master's Graduands

The following are the Master's degree graduands:

NAME	SUPERVISORS	EXTERNAL/INTERNAL EXAMINERS
<b>FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY - SCHOOL OF INFORMATION AND COMMUNICATION STUDIES</b>		
<b>MSC. INFORMATION AND KNOWLEDGE MANAGEMENT</b>		
Geoffrey G. Nyamasege	Prof. Omwoyo Bosire Onyancha, Prof. Tom Joseph Mboya Kwanya	Dr. Grace Wambui Kamau, Dr. Philemon Chebon
Villary Atieno Abok	Prof. Omwoyo Bosire Onyancha, Prof. Tom Joseph Mboya Kwanya	Dr. Ashah Owano H. Kaburu, Dr. Lilian Ingutia Oyieke
Mary A. Nyakwaka	Prof. Henry Kemoni, Dr. Lilian Ingutia Oyieke	Dr. Ashah Owano H. Kaburu, Dr. Hesborn Nyagowa
Rachel Muthoni Nyaga	Prof. Henry Kemoni, Dr. Grace Wambui Kamau	Dr. Tabitha Mbenge, Dr. Naomi Mwai
Wamugi Samuel Maina	Prof. Henry Kemoni, Dr. Naomi Mwai	Prof. Tom Joseph Mboya Kwanya, Dr. Philemon Chebon
Wanyama Hesborn Barasa	Dr. Tabitha N. Mbenge, Dr. Naomi Mwai	Prof. Henry Kemoni, Professor. Tom Joseph Mboya Kwanya
Humphrey Moturi	Prof. Tom Joseph Mboya Kwanya, Dr. Philemon Chebon	Prof. Henry Kemoni, Dr. Naomi Mwai
Obwaka Eddie Makokha	Prof. Tom Joseph Mboya Kwanya, Dr. Philemon Chebon	Not yet approved by VC
<b>FACULTY OF ENGINEERING SCIENCES AND TECHNOLOGY - SCHOOL OF MECHANICAL AND PROCESS ENGINEERING</b>		
Everlyne Kerubo Mosomi	Prof. Alex Muumbo, Prof. Reuben Marwanga	Dr. Bilha Eshton Gitonga, Prof. Odera Benard Okich
Kagia Joseph Njuguna	Prof. Alex Muumbo, Prof. Charles M. M. Ondieki (MMU)	Prof. Eric O. Ogur, Prof. Odera Benard Okich
Benard Mworira Warutumo	Dr. Pius Nderitu Kihara, Dr. Levi N. Mbugua	Prof. Ali Salim Islam
Angelina Auma Abuodha	Dr. Moses wamalwa, Dr. Pius Kihara	Prof. Ali Salim Islam
Dorcas Waithira Nduati	Dr. Levi N. Mbugua, Dr. Moses Wamalwa Wakoli	Prof. Ali Salim Islam

# Don speaks at UNESCO/WTO event in Korea



Dr. Hezron Osano speaks in Daejeon.

In October this year, a TU-K lecturer, Dr. Hezron Osano, relished a rare opportunity when he presented a paper on Smart Cities during UNESCO-WTA International Training Workshop, Global Innovation Forum and WTA Daejeon Hi-Tech Fair in Daejeon, Republic of Korea.

The event was an educational training program co-organized by UNESCO and World Technopolis Association (WTA) for the purpose of exchanging knowledge and information about Sustainable Development Strategy and Regional Innovation and reinforcing the capability of officials of science and technology parks (STPs).

The 2019 workshop was held under the theme of "Science & Technology Park and Smart City." The workshop and Global Innovation Forum was

hosted by UNESCO, UNIDO, World Technopolis Association (WTA) and Daejeon Metropolitan City. Some of the themes covered during the event included: Academia-Industry-Research Institute Collaboration in the Smart City; and Best Practice & Country Presentation session where Dr. Osano

**On university safety and security, the relevant staff were asked to more alert and diligent to happenings around the university by ensuring entry points and exits were secure. He asked the staff to always wear their uniforms while in the university for ease of identification.**

presented a paper on "Development of Science and Technology Park in the Smart City": The Case of Kenya. There was also Poster session where the participating institutions exhibited posters of their organizations. TU-K was among the institutions that had their posters exhibited.

The theme of 2019 Global Innovation Forum (GIF) was "Towards a Smart City from Sustainability Context" Cities around the world are moving towards smart cities in order to manage challenges caused by rapid urbanization. In 2019 GIF, the presenters explored the global trends of the smart city project and policy, identifying strategies to build a smart city in sustainable context.

Dr. Osano argued that development of smart cities should adopt a participatory approach by actively engaging citizens at all stages of development, taking into consideration the cultural and livelihood factors of all sections of society. Kenya has taken necessary steps to strengthen the core ICT infrastructure required to support the development of smart cities and Science and Technology Parks.

The don said development of STPs can serve as hubs of innovation ecosystems in diverse cities, counties and regions adding that the country has appropriate Science, Technology and Innovation policies but needs to provide adequate incentives for local innovation systems to generate and implement innovative smart infrastructure concepts that respond to specific local needs.

He noted that the upcoming Railway City Project provides TU-K an opportunity to engage in the project design and implementation and to ensure the establishment of technology park linked to the University, as research and development and innovation hub. This will facilitate effective collaboration between university-industry-government and the public/society and further position TU-K as a leading applied science and technology university.

# TU-K links with German varsity to offer clean energy in slums

TU-K in partnership with the Institute of New Energy Systems, Technische Hochschule Ingolstadt (THI) of Germany plans to establish a sustainable energy education project as part of the contribution by universities and scientists to enable communities attain Sustainable Development Goals (SDGs).

The project known as *Sustainable Energy Education Districts (SEED)* aims to enhance the living conditions of the people living within informal settlements in a bid to address the challenges of clean energy and rampant inequalities common in most urban centres and cities in Africa.

The objective of SEED will be to address the situation of poor infrastructure and basic services, with a special focus on the supply of affordable electricity and hot water using an interdisciplinary approach.

During a courtesy call on the Vice-Chancellor, Prof. Francis Aduol, the Project Advisor and Head of the Institute, Prof. Wilfried Zorner, indicated that urbanization had increasingly become a challenge for many African governments and regional planning, hence calling for concerted efforts by universities and researchers to intervene.

Prof. Zorner said Africa was experiencing the highest urban growth at 3.5 per cent per year, adding this rate is expected to hold until 2050, leading to the rapid growth of informal settlements which are densely populated, overcrowded, and lacking basic services such as water, affordable power supply, poor drainage systems and lack of proper waste management, access roads and footpaths.

He noted that the project dwells on strategies to achieve Sustainable Development Goals (SDGs) with special focus on SDG 7 and SDG 10 which emphasize on universal access to affordable, reliable and modern energy services, and equal opportunity and reduced inequalities respectively. Through the implementation of the project, he added, the entire living



*Prof. Wilfried Zorner (second left), Head of Institute of New Energy Systems, Technische Hochschule Ingolstadt (THI) with members of staff from TU-K in a laboratory.*

situation within the sprawling urban local settlements will be improved.

He said that the close cooperation between the universities and other partners will ensure knowledge transfer between the scientific partners and students with the instruments of research. Through this cooperation, TU-K will amongst others perform a central role in applied research by analyzing renewable energy needs and resources and intensify its potential for informal settlements.

He added that the University will further stand the opportunity to extend its capacities in collaboration with the local industry partners and the inter-link approach on renewable energy technologies adapted based on the needs of the local stakeholders, he said. This will empower researchers, students, profiting residents and people living around the project to have the opportunity to learn about sustainable energy supply.

Prof. Zorner said that the outcome

**The objective of SEED will be to address the situation of poor infrastructure and basic services, with a special focus on the supply of affordable electricity and hot water using an interdisciplinary approach.**

of this endeavor would also see the two institutions create a more conducive environment for working with the industry and further encourage the development of industry focused short courses. This would encourage students to write projects in specific areas where they would do their attachments hence closing the gap between theory and practice, further rejuvenating their entrepreneurship ideas and innovations in society.

Prof. Aduol lauded the project adding that TU-K had become the leading technical university in Kenya having cut a niche in technical knowledge, adding that the partnership would spur technological advancement of the university.

He said THI and TU-K were compatible in terms of their academic programmes which ranged from Automotive Engineering, Engineering Sciences, Aerospace Engineering, Mechanical Engineering among others saying the exchange would see TU-K gain technical skills in Energy Systems and Renewable Energies, Energy Technologies, Engineering Procurement and Automotive Production Engineering programmes.

Prof. Zorner was accompanied by the Institute's International Project Manager, Ms Petra Beer.

## TU-K tops in Africa MICE Awards



Mercy Cherono speaks at GMS.



Mercy Cherono holds the award she won.



Mutahi Kinyua, Event and Convention Management student holds the award the University won.

The Technical University of Kenya scooped two awards in the 2019 Africa Conferencing and Hospitality Annual Recognition Scheme.

In a ceremony held in September in Nairobi, Ms Mercy Cherono, Events and Convention Management student won the Meetings, Incentives, Conferences and Exhibitions (MICE) *Future Leader of the Year 2019 Award*. TU-K was also declared the MICE *Academic Institution of the Year 2019*.

Cherono beat three nominees in the category. Other categories earmarked for awards were pooled under corporate and individual segments.

The Africa MICE Awards seeks to recognise industry players that are innovative in organising business events and whose expertise and service levels meet global standards including training institutions as well as individual practitioners and students.

TU-K beat other two nominees in the inaugural contest in the African content. Divine Schools Africa came second while the Boma International Hospitality College based in Nairobi was ranked third.

The award scheme, according to the Chairman, Department of Leisure and Event Management, Dr. Davis Barasa, is part of the efforts to fill the gap in African market in areas of conferencing and exhibitions hospitality activities, especially in training professionals that

meet international standards.

“What we have experienced in the past, is that, industry players including hotels, event and convention organizers have all along trained their staff on the job. As a University, we are now building capacity in skills and training; this is to ensure the market shortfall is filled,” said Dr. Barasa.

Early this year, four students from the department were also nominated to represent East African universities in the continental 17<sup>th</sup> IMEX-MPI-MCI *Future Leaders Forum* that was held in South Africa. IMEX-MPI-MCI is a global programme supporting students looking forward to a careers in meetings and event management and also extends to provision of scholarships in sustainable event management.

The efforts to firm up MICE industry in Africa comes in the wake of global focus in conferencing

**TU-K was praised for its quest in training professionals in the industry being the only university offering a Bachelor's degree in events management in Sub-Saharan Africa.**

activities in the continent seen as unexplored market, boasting of cultural ingenuity, tourism sites besides facilities.

TU-K was praised during the award ceremony for its quest in training professionals in the industry being the only university offering a bachelor's degree in events management in Sub-Saharan Africa.

“TU-K is the only regional university offering Bachelor's Degree in Event and Convention Management in Kenya and in the region.” said Dr. Barasa.

The event, launched three years ago, is already receiving high commendation from industry players in Kenya and abroad with practitioners already enrolling for part time classes.

“The players are impressed by the training we offer, graduates we produce are quickly absorbed in the industry. Some of them are now employed by hotels in Nairobi including Radisson Blu, Villa Rosa Kempinski, among others,” said Dr. Barasa.

He said others have been employed in county governments, conferencing and conventional bureaus and corporates. Besides, the training prepares the students for self-employment in the industry adding that the department's key objective is to bridge skills and development gap in the leisure and event industry.



# Students secure IBM 2019 internship opportunity

TU-K students are among top six others who have secured a six-month paid internship opportunity with the giant International Business Machines (IBM).

George Gitau Kihara and Marion Penina Minayo, both final year computer technology students made TU-K emerge the leader in Software Engineer Intern 2019 Recruitment Drive, with the highest number of recruits followed by Jomo Kenyatta University of Agriculture & Technology, Maasai Mara University and Moi University, each with one.

IBM *ThinkLab* & Ecosystem Lead, Tonya Nyakeya in a commendation message said the organization was keen on furthering its partnership with TU-K in its quest to find the future wave of software engineers.

Ms. Nyakeya said the program offers an opportunity to work on meaningful technology solutions, develop scalable software systems, interact and collaborate with top research scientists in Artificial Intelligence, Health Informatics, Statistics, Robotics among others. She said all these diverse fields require research, asking the right questions, high level curiosity, and thinking outside the box.

The programme is expected to provide students with a unique six month paid internship that will offer students professional and personal development including mentorship from leading technology researchers.

The software engineering interns will be tasked to work on research questions that are of interest to IBM and have access to a vast number of tools and resources within the global IBM community to help them succeed in their careers. Furthermore, based on their background, the interns will be working in one of the areas such as artificial intelligence, artificial engineering and industries and research. The interns will be expected to have knowledge and experience in data structures, software development and coding using any of the languages such as Java, Java Script and NodeJS.

The Director of the School of Computing and Information Technology, Dr. Salesio Kiura, who was the lead



*George Gitau Kihara and Marion Penina Minayo, both final year computer technology students.*

contact, commended the students for their sterling performance adding that this had firmly confirmed TU-K's commitment to her motto, 'Education and training for the real world.' What this means is that the University is now training high caliber engineers where these interns could be the sample of the institution's products," he noted.

He added that a total of 9 students were nominated from different schools

**IBM ThinkLab & Ecosystem Lead, Tonya Nyakeya in a commendation message said the organization was keen on furthering its partnership with TU-K in its quest to find the future wave of software engineers.**

based on merit but only two were successful. He said IBM took the students through a thorough interview process in three thematic areas beginning with the technical challenge submissions, the technical interview and finally the fit interview. He said a total of 107 students from 26 universities both public and private participated with only six qualifying.

Dr. Salesio attributed the success of the School to the belief and practice of three approaches of service delivery for both lecturers and students which include involvement and collaboration with industry players, participatory approaches in teaching and use of new technologies for communication. He said the approaches have been crafted from the University's quality objectives with the aim of exposing students to the industry experts through innovations and talks.

# Staff joins global theatre association



*Mr Patrick Ogutu (left) with a Peru national display a placard*



*Mr Patrick Ogutu with locals in Lima, Peru, display artistic items at a Cultural Centre.*

A Technical University of Kenya member of staff has been elected Secretary General of the International Drama/Theatre and Education Association's (IDEA) General Meeting Committee (GMC) where he will represent Africa.

Mr. Patrick Ogutu who is also the Secretary General of the Kenya Universities Performing Arts and Film Association (KUPAA) was elected Committee's Secretary General during IDEA General Council Meeting held in Lima, Peru, in September this year.

"Members unanimously elected Ogutu from KUPAA-TUK, Kenya to be the secretary to the GCM and will also be representing the continent from time to time and especially East Africa region in IDEA," the conference report read adding that his contribution to the Committee would be highly commendable.

The University's drama club patron said through KUPAA, Kenya Films Classification Board (KFCB) facilitated his travel to Peru to represent the country and the region, where he made presentations depicting Kenya's image as a destination for movie making. He also highlighted the role of theatre in the economic development of Africa as well as promoting Kenya's tourism industry, indigenous African cultures and creative arts.

The annual congress brings together drama educators into a shared space where they deliberate on thematic areas such as creativity, understanding brain science and deep learning in drama and theatre, and connecting culture and society through drama.

In his new role, Mr Ogutu will lead in capacity building, development of policies regarding local content production initiatives through workshops aimed at script writing, production and adjudication of performing arts and film.

This is through development of projects, curricula and exchange of ideas and resources.

"This new assignment focuses on mutual engagement in scholarship through conferences, publishing, dissemination and research on African performing arts and film," said Ogutu adding that he extended invitation to IDEA members to make TU-K their home in the region and in the African continent.

Mr. Ogutu's role in the global

**Mr. Ogutu's role in the global stage will also to see that KUPAA's mandate has been expanded in areas of knowledge exchange and networking within East African region and in internationally arena.**

stage will also see KUPAA's mandate expanded in areas of knowledge exchange and networking within the East African region and internationally.

He noted that KUPAA had initiated bid for partnership with the IDEA to expand in areas of adjudication of national and East African universities drama and film festival in staged performances, radio theatre, film and television.

"This also includes seeking scholarship opportunities and practice of African performance and theatre through publishing, dissemination and encouraging research and information on African performing arts," he said.

In this regard, the collaboration seeks to establish Kenya Universities Performing Arts and Film Centre with modern theatre, conference facilities and film production facilities for purposes of nurturing young talent as well as setting up of incubation centers.

Mr. Ogutu also noted that these efforts would open up job opportunities for young people.

"The partnership between KUPAA and IDEA is expected to support the governments recommended policy of 60 percent local content in television stations and heightened activities towards a Kenya film with an identity" he added.

# Creative thinking key to innovation

By Rev. Chalton Silvan Ochola  
Protestant Chaplain

Nurturing creative mind is fundamental to development. Creativity is an active process necessarily involved in innovation. It is learning habit that requires skill as well as specific understanding of the contexts in which creativity is being applied.

The creative process is at the heart of innovation and development. For one to innovate one must be creative. And for one to be creative, he must be innovative. African continent will only develop when Africans will start thinking creatively and innovatively. Period. The fact that Africa continues to be a laughing stock is that other people are still doing the thinking for us. Their creative thinking make them produce goods for us as much as Africans can manufacture these same goods by themselves. African continues to beg even the goods that they already have! It is such a shame.

May God help this continent to rise to become thinkers and producers instead of continuing being perpetual beggars and consumers! How else can we develop if the people doing the thinking are foreigners? It is my clarion call that we start developing our creativity and



Rev. Chalton Silvan Ochola

innovativeness for the purposes of developing our continent with its myriad of resources.

Our Universities need to put emphasis on Creative and Critical Thinking as a common unit taught to all the students. It must become as a matter of priority. Why should our technical training institutions be left to the underdogs? These institutions should be institutions of production, manufacturing and innovation.

Engineers, technologists, architects, entrepreneurs, physicists and others, need to concretely invent tangible products within their domain that will demonstrate their scholarly acumen.

The Ministry of Education is attempting to discover the creative potential in children through what

has been dubbed Competency-Based Curriculum (CBC). This is an effort to discover the creative potential in each child as they grow and as they get schooled into adulthood. Each child or human being for that matter has inherently different creative abilities. The bad news is that we get schooled out of our creativity as we get through our educational system. Our creativity, which is an essential component of our human growth dies as we climb the academic ladder!

Innovation and creativity are fundamental to all academic disciplines and educational activities, not just the arts. At the Technical University of Kenya, creative and Critical Thinking is a common unit which is taught with the seriousness it deserves since it is a lifeline to innovation and development.

For Kenya and the rest of the developing countries to progress in their development efforts, it would be critical that our institutions of higher learning take creative thinking seriously. The creative nature and potential in each and every learner must be explored and exploited for the sake of innovation and development. Creativity is required to get efficiently implemented in all areas and at all levels in the field of education.

## Faculty and Staff Christian Fellowship group formed

The Faculty and Staff Christian Fellowship has finally been established at the Technical University of Kenya. The main objective and aim of this new group is to bring together all Christian believers for fellowship, prayer and witness. The members are to bring synergy to each other as they interact during fellowship, prayer and worship. It has a constitution that will regulate its governance and management processes which was promulgated on Tuesday, 12<sup>th</sup> November 2019. The election of the Executive was conducted on Thursday, 21<sup>st</sup> November 2019. It was presided by the Patron, the Protestant Chaplain, the Rev. Chalton Ochola and was assisted by the representative from Fellowship of Christian Unions (FOCUS), Mr Wilson Kiuna. The Executive Committee



*Elected Executive Committee Members of Faculty and Staff Christian Fellowship together with Committee Members of TUK- FSCF.*

members elected who will serve for two years as stipulated by the Constitution are: Chairman - Prof Dorcas Yole; Vice-Chairman- Ms Anne Ogonda; Secretary- Pst. George Ochieng; Treasurer- Mrs. Rahab Gichungi; Organizing Secretary- Mrs. Phanice Otieno. The group will be

coordinating Cell groups weekly prayers and Bible Study at Departmental and School levels. It will also be organizing Monthly faculty and staff worship services. Their weekly regular prayer meetings will be conducted at their Sanctuary behind the Civil Engineering Block.



# THE TECHNICAL UNIVERSITY OF KENYA

## MODULE II PROGRAMMES AT UNDERGRADUATE AND DIPLOMA LEVELS

# THE

Technical University of Kenya is the leading university in technological training in Kenya. The University was awarded a Charter in 2013, making it a full public university. The University specialises in training at the Postgraduate, Undergraduate and Diploma levels, while at the same time engaging in research. It has a clear upward movement policy, which makes it easy for students to move from one level to the next and recognise prior training by awarding students credit transfers. Interested individuals are encouraged to apply for the programmes listed below:



COURSE TITLE	REQUIREMENTS	DURATION
<b>FACULTY OF ENGINEERING SCIENCE AND TECHNOLOGY</b>		
<b>SCHOOL OF ARCHITECTURE AND THE BUILT ENVIRONMENT</b>		
Bachelor of the Built Environment (Construction Management)	• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics and Eng./Kis.	11 semesters (integrated programme)
Bachelor of Quantity Surveying	• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics and Eng./Kis.	11 semesters (integrated programme)
Bachelor of Technology (Building Construction)	• KCSE Mean Grade C+ (plus) with C+(plus) in Maths A and Physics OR • Credit Level Diploma in Technology in Building, Civil, Quantity Surveying or Architecture together with KCSE Mean Grade C- (Minus) or • Credit Level TEP Diploma in Building and Architecture KNEC or Equivalent with at least 2 years relevant work experience together with KCSE Mean Grade C- (Minus)	11 semesters (integrated programme)  6 semesters (part time)
Bachelor of Real Estate	• KCSE Mean Grade C+ together with C+ (plus) in Maths A	11 semesters (integrated programme) 6 semesters
Diploma in Technology (Real Estate)	• KCSE Mean grade 'C' (Plain) together with at least C (plain) in Maths	8 semesters (integrated programmes)
Diploma in Technology (Quantity Surveying)	• KCSE Mean grade 'C' (Plain) together with C (plain) in Maths A, Physics and Eng./Kis .	
Diploma in Technology (Construction Management)		
Diploma in Technology (Building Construction)	• KCSE Mean grade 'C' (Plain ) with C(plain) in Maths A and Physics.	8 semesters (integrated programme)
Diploma in Technology Architecture	• KCSE Mean grade 'C' (Plain) together with C (plain) in Maths A, Physics and Eng./Kis	
<b>SCHOOL OF SURVEYING AND GEOSPATIAL SCIENCES</b>		
Bachelor of Engineering (Geospatial Engineering)	• KCSE Mean Grade C+ (plus) with C+(plus) in Maths A and Physics	13 semesters (integrated programme)

COURSE TITLE	REQUIREMENTS	DURATION
Bachelor of Technology (Surveying Technology)	• KCSE Mean Grade C+ (plus) with C+(plus) in Maths A and Physics	11 semesters (integrated programme)
Bachelor of Science (Land Administration)	• KCSE Mean Grade C+(plus) and C+ (plus) in Maths A	13 semesters (integrated programme)
Bachelor of Technology: • Geoinformation Technology • Surveying Technology	• Credit Level Diploma in Technology – Geoinformation Technology • Surveying Technology OR Equivalent together with KCSE Mean Grade C- (Minus)	6 semesters (part time)
Diploma in Technology: • Geoinformation Technology • Surveying Technology	• KCSE Mean grade 'C' (Plain ) with C (plain) in Maths A and Physics.	8 semesters (integrated programme)
<b>SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING</b>		
Bachelor of Engineering (Electrical and Electronic Engineering)	• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics, Chemistry and Eng./Kis.	13 semesters (integrated programme)
Bachelor of Engineering Technology in Electrical and Electronic Engineering Technology	• Higher Diploma in Technology (Electrical and Electronic Engineering Technology) together with KCSE Mean Grade C- (Minus)	6 semesters (part time)
	• 3-year Credit Level Diploma in Technology (Electrical and Electronic Engineering Technology) together with KCSE Mean Grade C- (Minus)	7 semesters
	• 3-year Credit Level TEP Diploma In Electrical and Electronic Engineering with 2 yrs working experience together with KCSE Mean Grade C- (Minus)	7 semesters
Diploma in Technology (Electrical and Electronic Engineering)	• KCSE mean grade of C (plain) with at least C (plain) in Maths, Physics, Chemistry and Eng/ Kis.	9 semesters (integrated programme)
<b>SCHOOL OF INFRASTRUCTURE AND RESOURCE ENGINEERING</b>		
Bachelor of Engineering (Civil Engineering)	• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics, Chemistry and Eng./Kis.	13 semesters (integrated programme)

COURSE TITLE	REQUIREMENTS	DURATION	COURSE TITLE	REQUIREMENTS	DURATION
Bachelor of Engineering Technology (Civil Engineering)	<ul style="list-style-type: none"> <li>3-year Credit Level Ordinary Diploma or Diploma in Civil, Highway, Water Engineering, Building Construction or equivalent together with KCSE Mean Grade C- (Minus)</li> <li>Credit Level Diploma in Technology Civil Engineering or equivalent together with KCSE Mean Grade C- (Minus)</li> </ul>	6 Semesters (part time)	Diploma in Technology: Technical and Applied Physics	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Physics and D+ (plus) in Maths A</li> </ul>	8 semesters
Diploma in Technology (Civil Engineering)	<ul style="list-style-type: none"> <li>KCSE Mean grade C (Plain) with at least C (plain) in Maths, Physics, Chemistry and English/Kiswahili or Certificate in Civil or Water Engineering</li> </ul>	9 Semesters (integrated programme)	<b>SCHOOL OF BIOLOGICAL AND LIFE SCIENCES</b>		
<b>SCHOOL OF MECHANICAL AND PROCESS ENGINEERING</b>			Bachelor of Technology (Applied Biology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, C (Plain) in Maths A and Chemistry.</li> <li>OR</li> <li>3-year Diploma in Technology in Applied Biology or equivalent together with KCSE mean grade C-(minus)</li> </ul>	10 semesters (integrated programme)
Bachelor of Engineering (Chemical Engineering)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics, Chemistry and Eng./Kis.</li> </ul>	13 semesters (integrated programme)	Bachelor of Technology (Biotechnology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, C (Plain) in Maths A and Chemistry.</li> <li>OR</li> <li>3-year Diploma in Technology in Biotechnology or equivalent together with KCSE mean grade C-(minus)</li> </ul>	10 semesters (integrated programme)
Bachelor of Engineering Technology in Chemical Engineering	<ul style="list-style-type: none"> <li>3-year Credit Level Diploma in Technology (Chemical Engineering) and KCSE Mean Grade C- (Minus)</li> </ul>	6 Semesters (part time)	Bachelor of Technology (Food Science and Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, Chemistry and Physics/ Maths A</li> <li>OR</li> <li>3-year Diploma in Technology in Food Science Together with KCSE Mean Grade C- (Minus)</li> </ul>	11 semesters (integrated programme)
Bachelor of Engineering (Mechanical Engineering)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics, Chemistry and Eng./Kis.</li> </ul>	13 semesters (integrated programme)	Bachelor of Technology (Biochemistry)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, C (Plain) in Maths A and Chemistry.</li> </ul>	10 semesters (integrated programme)
Bachelor of Engineering Technology in Mechanical Engineering Technology	<ul style="list-style-type: none"> <li>3-year Credit Level Diploma in Mechanical Engineering Or Equivalent together with KCSE Mean Grade C- (Minus)</li> </ul>	7 Semesters (part time)	Diploma in Technology In Industrial and Applied Biology	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.</li> </ul>	7 semesters.
Bachelor of Engineering (Aeronautical Engineering)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, Physics, Chemistry and Eng./Kis.</li> </ul>	13 semesters (integrated programme)	Diploma in Technology in Biotechnology	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.</li> </ul>	7 semesters.
Diploma in Technology (Chemical Engineering Technology)	<ul style="list-style-type: none"> <li>KCSE Mean grade C (Plain) with at least C (plain) in Maths, Physics, Chemistry and English/Kiswahili</li> </ul>	9 Semesters (Integrated programme)	Diploma in Technology in Biochemistry	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.</li> </ul>	7 semesters.
Diploma in Technology (Mechanical Engineering – Options):	<ul style="list-style-type: none"> <li>Manufacturing Engineering</li> <li>Industrial Plant and Energy Engineering</li> <li>Automotive and Autotronic Engineering</li> <li>Structural Fabrication and Metallurgical Engineering</li> <li>Refrigeration and Air Conditioning Engineering:</li> <li>Mechatronic Engineering</li> </ul>	9 Semesters (Integrated programme)	Diploma in Technology In Ecology and Conservation Biology	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.</li> </ul>	7 semesters.
Diploma in Technology Aeronautical Engineering	<ul style="list-style-type: none"> <li>KCSE Mean grade C (Plain) with at least C (plain) in Maths, Physics, Chemistry and English/Kiswahili</li> </ul>	9 Semesters (Integrated programme)	Diploma in Technology (Food Science and Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, Chemistry and Physics/ Maths A</li> </ul>	7 semesters
<b>FACULTY OF APPLIED SCIENCES AND TECHNOLOGY</b>			<b>SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY</b>		
<b>SCHOOL OF MATHEMATICS AND STATISTICS</b>			Bachelor of Technology in Community Health and Wellness	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, Chemistry, Maths A/Physics and Eng./ Kis.</li> <li>OR</li> <li>3-year Diploma of Technology in Community and Public Health together with KCSE Mean Grade C- (Minus)</li> </ul>	11 Semesters (integrated programme)
Bachelor of Technology (Applied Statistics)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A</li> </ul>	10 Semesters (integrated programme)	Diploma in Community and Public Health	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Biology, Chemistry, Maths A/Physics and Eng./ Kis.</li> </ul>	8 semesters
Bachelor of Science (Mathematics)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A</li> </ul>	10 Semesters (integrated programme)	Diploma in Technology in Health Records and Information Technology	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with D+ (plus) in Maths A/B.</li> </ul>	6 semesters (part time)
Diploma in Technology: (Options)	<ul style="list-style-type: none"> <li>Applied Statistics</li> <li>Actuarial Science</li> </ul>	7 Semesters	Bachelor of Science (Medical Laboratory Science)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, Chemistry, Maths A/Physics and Eng./ Kis.</li> </ul>	11 Semesters (integrated programme)
<b>SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY</b>			Bachelor of Technology in Medical Laboratory Technology	<ul style="list-style-type: none"> <li>3-year Diploma in Medical Laboratory Technology together with KCSE Mean Grade C (Plain)</li> </ul>	6 semesters (part time)
Bachelor of Technology (Information Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C (Plain) in Maths A</li> </ul>	10 Semesters (integrated programme)	Bachelor of Science (Nutrition and Dietetics)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, Chemistry, Maths A/Physics and Eng./ Kis.</li> </ul>	11 Semesters integrated
Bachelor of Technology (Computer Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A and Physics</li> </ul>	10 Semesters (integrated programme)	Bachelor of Technology in Nutrition and Dietetics	<ul style="list-style-type: none"> <li>3-year Diploma in Technology in Nutrition and Dietetics together with KCSE Mean Grade C- (minus)</li> </ul>	6 semesters
Bachelor of Technology (Communication and Computer Networks)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A and Physics</li> </ul>	10 Semesters integrated	Diploma in Technology Nutrition and Dietetics	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with D+ (plus) in Biology, Chemistry, Maths A/Physics and Eng./ Kis.</li> <li>Or Certificate with KCSE D+ in a related course</li> </ul>	8 semesters (integrated programme)
Bachelor of Technology In:	<ul style="list-style-type: none"> <li>Computer Technology</li> <li>Information Technology</li> <li>Communication and Computer Networks.</li> </ul>	6 semesters (TU-K) 7 Semester (TEP) (part time)	Diploma in Medical Laboratory Technology	<ul style="list-style-type: none"> <li>KCSE mean grade C (plain) With C (Plain) in Biology, Chemistry, Maths/Physics, Eng/Kis</li> </ul>	9 Terms (Integrated full time)
Diploma in Technology (Information Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Maths A</li> </ul>	8 semesters (integrated programme)	Diploma in Pharmaceutical Technology	<ul style="list-style-type: none"> <li>KCSE Mean grade C (plain) with C (Plain) in Biology, Chemistry, Maths/Physics, Eng/Kis</li> </ul>	9 Terms (Integrated full time)
Diploma in Technology	<ul style="list-style-type: none"> <li>Computer Technology</li> <li>Communication and Computer Networks</li> </ul>	8 semesters (integrated programme)	<b>FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY</b>		
<b>SCHOOL OF PHYSICAL SCIENCES AND TECHNOLOGY</b>			<b>SCHOOL OF BUSINESS AND MANAGEMENT STUDIES</b>		
Bachelor of Technology (Technical and Applied Physics)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Physics and C (plain) Maths A</li> <li>OR</li> <li>3 Year Diploma in Technical and Applied Physics together with KCSE Mean Grade C- (minus)</li> </ul>	10 Semesters (integrated programme)	Bachelor of Science in Accountancy	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A and Eng./Kis.</li> </ul>	10 semesters (integrated programme)
Bachelor of Technology (Industrial and Applied Chemistry)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C+ (Plus) in Chemistry, C (Plain) in Maths A and Physics.</li> <li>OR</li> <li>3-year Dip. Tech in Analytical/Industrial Chemistry or equivalent qualification together with KCSE Mean Grade C- (Minus)</li> </ul>	10 semesters (integrated programme)	BACHELOR OF COMMERCE	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B.</li> </ul>	10 semesters (integrated programme)
Diploma in Technology in Analytical Chemistry	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Chemistry, D+ (Pus) in Maths A and Physics.</li> </ul>	6 semesters	Bachelor of Business Studies	<ul style="list-style-type: none"> <li>3-Year Diploma together with KCSE C- (minus) or Certificate together with KCSE D+ (plus) followed by 3 year Diploma in: <ul style="list-style-type: none"> <li>Business Administration</li> <li>Human Resource Management</li> <li>Sales and Marketing Management</li> <li>Procurement and Supply Chain Management</li> </ul> </li> </ul>	6 semesters
Diploma in Technology in Industrial Chemistry	<ul style="list-style-type: none"> <li>KCSE Mean Grade C- (minus) with C- (minus) in Chemistry, D+ (Pus) in Maths A and Physics.</li> </ul>	7 semesters	Bachelor of Technology (Business Information Technology)	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B.</li> <li>OR</li> <li>Higher/Advanced Diploma in Information Technology or Computer Science OR 3-year Dip. Tech. Business Information Technology (BIT), Diploma in Information Technology, Computer Science or Equivalent together with KCSE Mean Grade C- (Minus)</li> </ul>	10 semesters (integrated programme)
Bachelor of Technology in Environmental Science	<ul style="list-style-type: none"> <li>KCSE mean grade C+ (plus) with C+ (plus) in Biology and Chemistry</li> <li>OR</li> <li>3-year Diploma in Technology in Environmental and Resource Management together with KCSE Mean Grade C- (Minus)</li> </ul>	10 semesters (integrated programme)	Bachelor of Technology in Office Administration and Technology	<ul style="list-style-type: none"> <li>KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B.</li> <li>OR</li> <li>Higher Diploma (HDip.) in Secretarial Studies or 3-year Diploma in Secretarial Studies or Equivalent together with KCSE Mean Grade C- (Minus)</li> </ul>	6 semesters (part time)
Diploma in Environmental Resource Management	<ul style="list-style-type: none"> <li>KCSE mean grade C- (minus) with C- (minus) in Biology and Chemistry Or a 1-year Certificate with KCSE D+ in relevant areas from a recognized institution</li> </ul>	6 semesters			10 semesters (integrated programme)
		7 semesters			6 semesters (part time)

COURSE TITLE	REQUIREMENTS	DURATION
Diploma in Business Information Technology	• KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR Certificate in Information Technology together with KCSE D+ (Plus).	8 semesters
Diploma in Entrepreneurship		
Diploma in Business Studies Options: • Business Administration • Human Resource Management • Sales and Marketing Management • Procurement and Supply Chain Management	• KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR: • 1-year Certificate together with KCSE D+ (Plus) in a relevant area.	8 semesters (integrated programme)
Diploma in Accountancy	• KCSE Mean Grade C+ (plus) with C+ (plus) in Maths A and Eng./Kis.	8 semesters (integrated programme)
Diploma in Office Administration: • Legal Secretarial • Medical Secretarial • Business Secretarial • Foreign Language Secretarial	KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR: • 1-year Certificate together with KCSE D+ (Plus) in a relevant area.	8 semesters (part time)
<b>SCHOOL OF INFORMATION AND COMMUNICATION STUDIES</b>		
Bachelor of Science (Information Science)	• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B.	8 semesters (integrated programme)
Bachelor of Technology (Information Studies)	• 3-year Diploma in Technology (Library & Information Technology) or Diploma in Technology (Archive and Records Managements) or Diploma in Information Science together with KCSE Mean Grade C- (Minus)	6 semesters (part time)
Bachelor of Technology in Journalism and Mass Communication	• KCSE Mean Grade C+ (plus) with C+ (plus) in Eng./Kis. OR • 3-year Diploma in Journalism and Mass Communication from TUK or Equivalent together with KCSE Mean Grade C- (Minus)	10 semesters (integrated programme)  6 semesters (part time)
Diploma of Technology in Journalism and Mass Communication	• KCSE Mean Grade C- (Minus) and at least C- (minus) in English/Kiswahili	8 semesters (part time)
Diploma in Technology in: • Archives and Records Management • Library and Information Technology	• KCSE Mean Grade C- (Minus) and D+ (plus) in Maths A/B or relevant certificate together with KCSE D+ (Plus).	8 semesters (part time)
<b>SCHOOL OF SOCIAL AND DEVELOPMENT STUDIES</b>		
Bachelor of Economics	• KCSE Mean Grade C+ (plus) and C+(plus) in Maths A	10 semesters (integrated programme)
Bachelor of Science Counseling Psychology	• KCSE Mean Grade C+ (plus) OR • 3-year Diploma In Counseling Psychology or related discipline together with KCSE Mean Grade C- (Minus)	10 semesters (integrated programme)  6 Semesters (part time)
Diploma in Social Work and Community Development	• KCSE Mean Grade C- (Minus)	7 Semesters (part time)
Diploma in Counseling Psychology		
Bachelor in International Relations and Diplomacy	• KCSE Mean Grade C+ (plus) with C+ (plus) in Eng./Kis OR • 3-year Diploma in International Relations together with KCSE Mean Grade C- (Minus) . Knowledge of French is recommended.	10 semesters (integrated programme) 6 semesters (part time)
Diploma in International Relations and Diplomacy	• KCSE Mean Grade C- (Minus) with C- (Minus) in English/Kiswahili	8 semesters (part time)
Diploma in Disaster Management		
Diploma in Criminology and Security Studies	• KCSE Mean Grade C- (minus)	7 semesters (part time)
Diploma in Legal Studies	• KCSE Mean Grade C (plain) with C+(plus) in English/Kiswahili OR • KCSE Mean grade C- (minus) and C (plain) in English/Kiswahili together with Certificate in Criminology, Criminal Investigations, Disaster Management, Criminal Justice or Crime Prevention or its equivalent	7 semesters (part time)
<b>SCHOOL OF CREATIVE ARTS AND TECHNOLOGIES</b>		
Bachelor of Technology in Design	• KCSE Mean Grade C+ (plus) with C (plain) in Maths A OR • 3-year Diploma in Design from TUK or Equivalent together with KCSE Mean Grade C- (Minus)	10 semesters (integrated programme)  6 semesters (part time)
Diploma in Technology in Design	• KCSE mean grade C- (Minus) and D+(plus) in Maths A. Applicants are advised to provide portfolios for verification by the University.	8 semesters (part time)
Bachelor of Music	• KCSE Mean Grade C+ (plus) with C+ (plus) in Music. OR • 3-year Diploma in Music from TU-K Or ABRSM/LCM/ UNISA/LRSM/Trinity College or equivalent together with KCSE Mean Grade C- (Minus)	11 semesters (integrated programme)  6 semesters (integrated programme)
Diploma in Music	• KCSE C- (minus) with C-(Minus) in Music. OR Grade 5 theory and/or practical of ABRSM, LCM or equivalent body together with KCSE D+ (Plus). Involvement in Music Festivals, Church Music/Gospel Music performance will be an added advantage.	8 semesters (integrated programme)
Bachelor of Philosophy in Technology (Printing)	• Higher Diploma in Printing Technology together with KCSE Mean Grade C- (Minus) or equivalent	5 semesters (part time)
Diploma in Technology in Printing	• K.C.S.E Mean Grade C- with C- (Minus) in English/Kiswahili or Certificate in Machine Printing, Print Finishing, Print Origination together with KCSE D+	8 Semesters (integrated programme)

COURSE TITLE	REQUIREMENTS	DURATION
Diploma in Technology (Fashion Design)	• KCSE Mean grade C- (minus) with D+ (plus) in Chemistry or a one year relevant certificate with KCSE D+ (Plus)	8 semesters (integrated programme)
<b>SCHOOL OF HOSPITALITY AND TOURISM STUDIES</b>		
Bachelor of Science (Tourism and Travel Management)	• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B	11 Semesters (integrated programme)
Bachelor of Technology (Tourism and Travel Management)	• 3-year Diploma in Tourism and Travel or Equivalent PLUS A mandatory 2 years relevant industry experience together with KCSE Mean Grade C- (Minus)	6 Semesters (part time)
Bachelor of Science (Hospitality Management)	• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B	11 Semesters (integrated programme)
Bachelor of Technology in Hotel and Restaurant Management	• 3-year Diploma in Technology (Dip-Tech) in Hotel and Restaurant Management from TUK, or equivalent qualification together with KCSE Mean Grade C- (Minus)	6 semesters (part time)
Bachelor of Technology in Institutional Catering and Accommodation Management	• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B OR • 3-year Diploma of Technology in Institutional Catering and Accommodation Management/ Diploma in Housekeeping and Office Management from TU-K/KPUC or equivalent together with KCSE Mean Grade C- (Minus)	11 semesters (integrated programme)  6 semesters (part time)
Bachelor of Science (Event and Convention Management)	• KCSE Mean Grade C+(plus)	10 semesters (integrated programme)
Diploma of Technology in Tourism and Travel Management	• KCSE C- (minus) Mean grade and D+ (plus) in Maths A/Maths B or relevant certificate together with KCSE D+ (plus).	8 Semesters (part time)
Diploma In Technology in Event and Convention Management	• KCSE C- (minus) Mean grade or relevant certificate together with KCSE D+ (plus).	8 Semesters (part time)
Diploma in Technology in Hotel and Restaurant Management	• KCSE C- (minus) Mean grade and D+ (plus) in Maths A/Maths B or relevant certificate together with KCSE D+ (plus).	8 Semesters (part time)
Diploma in Technology (Dip-Tech) in Institutional Catering and Accommodation Management	• KCSE C- (minus) Mean grade and D+ (plus) in Maths A/Maths B or relevant certificate together with KCSE D+ (plus).	8 Semesters (part time)

## ONLINE APPLICATION PROCEDURE

Please read the following application guidelines carefully before you apply:

1. Visit the University website [www.tukenya.ac.ke](http://www.tukenya.ac.ke) and locate the menu "Intake September 2019";
2. Sign Up and create an account;
3. Enter your personal details to obtain a REFERENCE NUMBER;
4. Copy the REFERENCE NUMBER and quote it as you pay a non-refundable application fees of KES 2000 at any branch of Kenya Commercial Bank. Use the REFERENCE NUMBER AS ONE OF YOUR NAMES. Your payment will be confirmed automatically after 24 hours;
5. After 24 hours elapse, return to the University website, log in and proceed to enter your academic qualifications
6. Upload a scanned copy of the corresponding certificate/result slip against each qualification;
7. Choose your preferred programme of study; then
8. SUBMIT the application and wait for the selection process to be completed. You can always login and check for your application status using your account details.

### NOTE:

- Bank Account Details: Kenya Commercial Bank (KCB); Account Number: 1101632445
- Your payment will FAIL if you pay before obtaining a REFERENCE NUMBER
- You can apply for another course if you pay for it using the same REFERENCE NUMBER.

The successful applicants will be expected to pay the FULL TUITION FEES FOR THE SEMESTER. For Details of Fees, please check on the website within the admission menu.

The applications should be completed and submitted NOT LATER THAN 30<sup>th</sup> April, 2019.

Haile Selassie Avenue • P. O. Box 52428 – 00200, City Square, Nairobi • Tel. +254 20 2219929, 3341639 • Fax: +254 (020) 2219689 • E-mail: [registrar-academic@tukenya.ac.ke](mailto:registrar-academic@tukenya.ac.ke)



# THE TECHNICAL UNIVERSITY OF KENYA

SCHOOL OF GRADUATE AND ADVANCED STUDIES

## POSTGRADUATE DEGREE PROGRAMMES STARTING SEPTEMBER 2019

**T**HE Technical University of Kenya (TU-K) is one of the special public universities in Kenya providing technical education and training. At the same time, it engages in research and innovation that is focused on application of technological knowledge and skills in the solution of societal problems. The University invites applications from suitable and qualified persons to enrol for the following postgraduate programmes:

PROGRAMME	ELIGIBILITY	DURATION
<b>SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCE</b>		
Master of Science in Applied Statistics	<ul style="list-style-type: none"> <li>a) At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>b) Second Class (Lower Division) Honours degree from a recognized university and at least two years working experience.</li> <li>The candidate must also have taken at least 12 units in Mathematics in their last two years of undergraduate studies. And have a minimum average of 58% in the Mathematics area of specialisation, namely Pure or Applied at undergraduate level</li> </ul>	5 semesters
Master of Science in Applied Statistics	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Science in Mathematical Statistics	<ul style="list-style-type: none"> <li>a) At least a Second Class (Upper Division) Honours degree from a recognized university OR</li> <li>b) Second Class (Lower division) Honours degree from a recognized university and at least two years working experience.</li> <li>The candidate must also have taken at least 12 units in Mathematics in their last two years of undergraduate studies. And have a minimum average of 58% in the Mathematics area of specialisation, namely Pure or Applied at undergraduate level.</li> </ul>	5 semesters
Master of Science in Mathematical Statistics	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Science in Mathematics (Pure or Applied Mathematics)	<ul style="list-style-type: none"> <li>a) At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>b) Second Class (Lower Division) Honours degree from recognized university and at least two years working experience.</li> <li>The candidate must also have taken at least 12 units in Mathematics in their last two years of undergraduate studies. And have a minimum average of 58% in the Mathematics area of specialisation, namely Pure or Applied at undergraduate level.</li> </ul>	5 semesters
<b>SCHOOL OF BIOLOGICAL AND LIFE SCIENCES</b>		
Master of Technology in Applied Parasitology	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	5 semesters
Master of Science in Forensic Biochemistry	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience.</li> </ul>	5 semesters
Master of Philosophy in Applied Parasitology	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	5 semesters
Master of Science in Applied Parasitology	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	5 semesters
<b>SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY</b>		
Master of Science in Community Nutrition	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Science in Medical Laboratory Sciences	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Technology in Applied Entomology	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Public Health	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
<b>SCHOOL OF PHYSICAL SCIENCES AND TECHNOLOGY</b>		
Master of Technology in Environmental Resource Management	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	4 semesters

PROGRAMME	ELIGIBILITY	DURATION
<b>SCHOOL OF MECHANICAL AND PROCESS ENGINEERING</b>		
Master of Technology (Mechanical Engineering)	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience in the following areas:               <ol style="list-style-type: none"> <li>Bachelor of Technology in Mechanical Engineering Technology</li> <li>Bachelor of Philosophy in Mechanical Engineering Technology</li> <li>BSc/B.Eng in Mechanical Engineering or its equivalent</li> </ol> </li> </ul>	5 semesters
<b>SCHOOL OF ELECTRICAL AND ELECTRONIC ENGINEERING</b>		
Doctor of Philosophy in Electrical and Electronic Engineering	<ul style="list-style-type: none"> <li>A holder of a Master's degree of TU-K in the relevant field, or</li> <li>A holder of a relevant Master's degree from another institution recognized by Senate</li> </ul>	3 Years
Master of Science in Electrical and Electronic Engineering	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Master of Science (Electrical Engineering)	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience in BSc/B.Eng in Electrical Engineering or its equivalent</li> </ul>	
<b>SCHOOL OF BUSINESS AND MANAGEMENT STUDIES</b>		
Master of Arts in Entrepreneurship	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	4 semesters
Master of Business Administration	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	
<b>SCHOOL OF INFORMATION AND COMMUNICATION STUDIES</b>		
Master of Applied Linguistics	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	4 semesters
Master of Science in Information and Knowledge Management	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience</li> </ul>	4 semesters
<b>SCHOOL OF SOCIAL AND DEVELOPMENT STUDIES</b>		
Master of Science in International Relations	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience.</li> </ul>	4 semesters
<b>SCHOOL OF CREATIVE ARTS AND TECHNOLOGIES</b>		
Master of Music in Music Education or African Music Studies	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience.</li> </ul>	4 semesters
Master of Musical Arts in Composition or Performance	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	4 semesters
Postgraduate Certificate in Research Methods	<ul style="list-style-type: none"> <li>At least a Second Class (Upper division) Honours degree from a recognized university OR</li> <li>Second Class (Lower Division) Honours degree in the relevant disciplines with a Postgraduate certificate and 2 years of relevant work experience</li> </ul>	1 semesters

Applications for the Programmes above should be made by completing the online application form available on the Technical University of Kenya application portal: [intake.tukenya.ac.ke](http://intake.tukenya.ac.ke).

The application form should be accompanied by copies of ACADEMIC CERTIFICATES, ID CARD and a bank deposit slip of a NON-REFUNDABLE APPLICATION FEES of Ksh 2,000/= paid against the application form REFERENCE NUMBER.

### Bank Account Details

#### NOTE:

- Bank Account Details: Kenya Commercial Bank (KCB); Account Number: 1101632445
- Your payment will FAIL if you pay before obtaining a REFERENCE NUMBER
- You can apply for another Programme if you pay for it using the same REFERENCE NUMBER.

The successful applicants will be expected to pay the **FULL TUITION FEES FOR THE SEMESTER**. For Details of Fees, please check on the website within the admission menu.

The applications should be completed and submitted **NOT LATER THAN 30<sup>th</sup> April, 2019**.  
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*Education and Training for the Real World*

## CONTACTS

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