



## BUSINESS UNUSUAL

The Vice-Chancellor, Prof. Benedict Mutua, lays bare his vision for TU-K as he mulls far-reaching reforms to ensure sustained growth. [—Read full interview on Page 8-11](#)



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### EDITORIAL TEAM:

Dr Ken Ramani, Cosmas Kanyadudi, Daniel Macharia, Billy Mutai, Lucy Anaya, Elizabeth Kariuki, Alex Wamonje, Vincent Ogotu, Bernard Awino, Judith Akoth, Ivy Bonareri, Elvis Kimutai, David Mwangi

# LET'S WORK TOGETHER TO MAKE TU-K GREAT

Since I took office as Vice-Chancellor, in September, 2023, it has been a pleasure interacting with the staff and students of The Technical University of Kenya.



Prof. Dr-Ing. Benedict M. Mutua

The University Council led by the Chairman, Dr Idle Omar Farah, has offered me immense support and enabled me to settle down very fast. The members of staff, the University Management Board and the University Senate, have all continued working hard as ever to ensure the University achieves its vision and mission. I don't take the support accorded to me for granted. To all of you, I say, thank you so much and may God bless you!

Considering the amount of work ahead of us, I pray that the year 2024 will be a year of great achievements for TU-K. Naturally all human beings are called to serve God. By diligently serving humanity, by extension we are serving God. You can't purport to be serving God if you are doing wrong things in society. The position you hold in society doesn't matter. Everyone offers a service in whatever capacity. Always strive to do your best with honesty.

For continuing students, there are no shortcuts to doing well in your studies. Self-denial, discipline and hard work are the only habits that guarantee success. Taking corners will only derail your genuine life ambitions. Avoid them by all means.

It is my hope that the tranquility I found in this institution will continue for the longest time possible. Dialogue and diplomatic approach to issues have been proven to be the best tactic in resolving sticky issues. The Management is always open to engage the student leadership in addressing student concerns the best way possible.

For the graduating class of 2023, I wish you the best in your future endeavours. Even as you depart, have the TU-K in your mind and make it the first choice if and when you decide to pursue postgraduate studies.

For those joining the labour market, use well that degree or diploma certificate you have earned from TU-K. Enhance that certificate with some professional training in any area of your choice. It will take you places by unlocking infinite opportunities that life offers. Do not be choosy. Grab any opportunity that comes your way even as you hunt for your dream job.

I wish everyone a happy and prosperous 2024!

**“Considering the amount of work ahead of us, I pray that the year 2024 will be a year of great achievements for TU-K. Naturally all human beings are called to serve God. By diligently serving humanity, by extension we are serving God.”**



Prof. Benedict Mutua speaks during a joint meeting between the University Council and University Management Board.



Prof. Benedict Mutua with Council Members and the University Management Board after the joint meeting in the Conference Room.

# FULL HOUSE AS PROF. BENEDICT MUTUA TAKES OFFICE

Prof Benedict Mutua assumed office on 18<sup>th</sup> September 2023 in the presence of the full University Council. Prof Mutua was introduced to the University during a joint meeting between the University Council and the University Management Board (UMB) held in the Conference Room. He noted that Prof Mutua was

The Chairman of the University Council, Dr Idle Farah, welcomed Prof Mutua and assured him of the full support from the Council and the university community at large. "Be assured that you are joining a great university that has recorded a range of successes."

country was implementing a range of reforms as provided for in the report of the Presidential Working Party on Education Reforms that will affect all institutions of learning. Dr Farah said it's time for the Management to come up with a new strategic plan to take the institution forward.

The Chairman of Council noted that financial constraints and other governance issues will be the immediate tasks the new Vice-Chancellor will be confronted with.

Dr. Farah challenged the University Management to support Prof. Mutua to ensure that issues of student unrest do not occur and therefore taint the image of the University.

The Chairman handed over the instruments of power to Prof Mutua.

The instruments included the original signed copy of the University

Charter, seal, a copy of the statutes, emblem, a copy of Universities Act, a copy of the Organisational Structure and copies of various accreditation certificates.

Prof Paul Shiundu, who had been performing the duties of the Vice-Chancellor in acting capacity, said the challenges facing TU-K were surmountable and wished the new VC the best in his new role.

Prof Shiundu, whose second term as DVC in charge of Academic and Student Affairs ended on 21<sup>st</sup> August, 2023, handed over his exit report as well as that of his time as Acting VC, a role he took up on 16<sup>th</sup> May 2023.

The immediate former Vice-Chancellor, Prof Francis Aduol handed over his exit report and congratulated Prof Mutua on his appointment.

He noted that he exited the helm of TU-K leadership with his head up because of the great achievements the institution had recorded.

"TU-K has in past five years been ranked between number 6 and 8 nationally. This is no mean achievement considering we are the only institution formed after 2013 that

has consistently appeared in the top 10."

Prof Aduol noted that the University had hired some of the top rated academic staff and that it had developed a strong reputation over the years. He assured the new VC of his unwavering support to move the institution forward.



Prof. Mutua greets Ms Isabella Kogei, a Council member.



Dr. Idle Farah hands the University Seal to The ice-Chancellor, Prof Mutua as Prof Shiundu looks on.



Dr. Idle Farah hands the signed Original University Charter to the VC, Prof Mutua



Prof. Francis Aduol, the immediate former VC, speaks during the joint University Management Board and Council meeting at which he handed over his exit report.



SATUK Chairman, Dennis Muchoki, speaks at the joint meeting between the University Management Board and University Council.

# PROF. BENEDICT MUTUA IS AN ACCOMPLISHED SCHOLAR

Prof. Dr.-Ing. Benedict M. Mutua, is a Professor of Water Resources, Environmental and Hydraulics Engineering. Over the years, he has served in various capacities at the University setting at the international level. He is a Professor in several reputable universities.

Prof. Mutua obtained his BSc Agricultural Engineering (Soil and Water Engineering) and graduated with a First Class Honours. He also did a Diploma in Soil and Water Engineering and Obtained a Distinction at Egerton University.

He proceeded to the University of Melbourne, Australia, for his MEng. Science in Civil and Environmental Engineering and specialised in Fluid Dynamics and Hydraulics Engineering.

Prof. Mutua pursued a Postgraduate Diploma in Water Resources and Hydrology at Tel Aviv in Israel and later on proceeded to the Hebrew University of Jerusalem, and pursued another MSc degree in Water Resources Engineering (Specialising in Water Engineering Systems and Management).

Prof. Mutua did his PhD and post-doctoral in Water Resources and Environmental Engineering at the University of Natural Resources and Life Sciences (BOKU) – Austria.

So far, Prof. Mutua has done five post-doctoral research at different universities across the world.

To enhance his management and administrative skills, Prof. Dr.-Ing. Benedict Mutua did his third Master's in Business Management (MBA) specialising in Human Resource Management from the Indian Institute of Business Management and Studies (IIBMS).

Prof. Mutua further did another Doctorate in Management Studies (DMS) specialising in Human Resource Management from the Technical University of Berlin, Germany.

Prof. Mutua is well versed in research and he has won very many competitive research grants. He has attracted over Sh.15 billion in his research career.

He has contributed and impacted the community positively from his research, innovation and consultancy work in the area of Water Resources and Environmental Engineering. For instance, he designed and developed a simplified



Prof. Benedict Mutua, PhD, Rer. Nat.

**Throughout his career, Prof. Mutua has exemplified an unwavering commitment to the values that define this University - integrity, innovation, inclusivity, mentorship and a steadfast commitment to nurturing an environment that fosters learning and discovery. He brings a wealth of experience and a vision that transcends boundaries, inspiring us all to reach greater heights of academic excellence.**

tool for Integrated Water and Sanitation Systems to be used by engineers and planners for different water and sanitation systems in towns and cities.

Prof. Mutua has won International Recognition which includes being recognised by Marquis Who is Who in the

World for his research contribution in the Field of Engineering and Science.

Prior to joining TU-K, Prof Mutua had held several administrative and leadership positions in the university setting. For instance, he served as a Deputy Vice-Chancellor in charge of Planning, Partnerships, Research and Innovation for close to 8 years and acted as Vice-Chancellor at Kibabii University. Earlier on, he served as a Director School of Graduate Studies at Egerton University, Dean Faculty of Engineering and Technology and Chairperson, Department of Agricultural Engineering at Egerton University and later served as a Member of Council at the then Laikipia University College.

Prof. Mutua has supervised many postgraduate students at Master's, PhD and post-doctoral levels and externally examined many theses. He has been a thematic leader in designing and developing curricula for different universities.

He has published several University level books and book chapters, scientific articles in peer refereed international journals, peer-reviewed conference proceedings, peer-reviewed technical reports, a number of consultancy and project reports, and refereed learning modules. He has travelled widely and presented his research findings at several national, regional and international conferences and fora. He has also won a number of short-term visiting professorial fellowships tenable in different countries.

Throughout his career, Prof. Mutua has exemplified an unwavering commitment to the values that define this University - integrity, innovation, inclusivity, mentorship and a steadfast commitment to nurturing an environment that fosters learning and discovery. He brings a wealth of experience and a vision that transcends boundaries, inspiring us all to reach greater heights of academic excellence.

Prof. Mutua possesses the rare ability to inspire, mentor, motivate, and lead by example, fostering a culture of integrity, mentorship, collaboration and innovation that will propel us forward into a future brimming with possibilities.



Principal Secretary for Higher Education and Research, Dr. Beatrice Muganda Inyangala, addresses graduands.



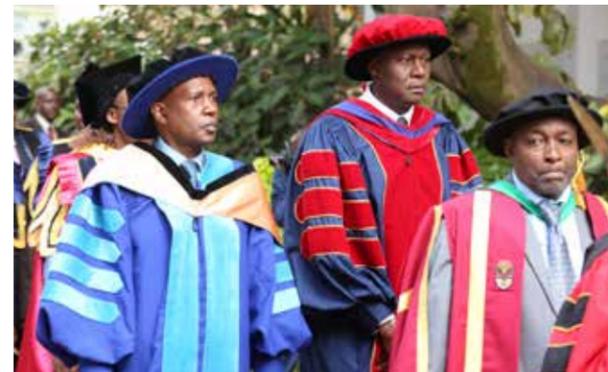
The Acting Chancellor and Chairman of University Council Dr Idle Farahuring the ceremony



The Acting Chancellor, Dr. Idle Farah, hands to the VC the University Mace as PS, Dr. Beatrice Inyangala (left), and Registrar (Academic), Dr. Moses Wamalwa looks on.



The VC, Prof. Benedict Mutua speaks during the 12<sup>th</sup> Graduation Ceremony



L. to R.: DVCs Prof Paul Wambua, Prof Alfred Orina and Acting DVC-ASA, Prof Francis Gatheri in the academic procession



Members of the University Council arrive at the Graduation Square for the ceremony



A section of the graduands



Members of faculty in a procession



# IT'S A NEW DAWN FOR TU-K

*The Vice-Chancellor, Prof. Dr.-Ing. Benedict M. Mutua, has outlined his plans for TU-K to be achieved during his first five-year term in office that started on September 18, 2023. The VC says several changes will be made adding that some of them are already being implemented. He explains that some of the planned reforms might be slow and painful, but necessary for the sustainability of TU-K. Basically, it's not going to be business as usual. Prof. Mutua was interviewed by the Director, Communications and Public Affairs, Dr. Ken Ramani.*

**Question:** You have been in office as Vice-Chancellor of TU-K for two-and-half months now. So far what's your experience?

**Answer:** My experience here has been a mixed bag of fortunes. I was received very well by the University community. The University Council, the staff and students have, and still continue offering me immense support in everything we are doing. However, the perception I had about TU-K was turned its head once I assumed office. I thought I was joining a well-run system. Little did I know that the institution was literally living hand-to-mouth. The cash-flow challenges are still very serious. For me, it was baptism by fire on week two after my arrival here. Staff missed their September salary and the unions quickly mobilised their members to picket. Even national officials of a union threw protocol out of the window and joined the TU-K Chapter in the picketing! I later realised the salary delay could have been avoided had we planned well because the signs were too clear and in good time.

**Q. What else is in TU-K's bag of mixed fortunes?**

**A.** One of the shocks is the number of staff compared to the number of students. Basically it is dizzying. The Departments - both administrative and academic are operating on a non-existent staff establishment. The organisational structure is top heavy and unique when compared to sister institutions. Our wage-bill is extremely high and unsustainable. Little wonder we cannot pay salaries in good time because we are wholly dependent on monthly capitation from the Government. I was also shocked that there was no almanac for Senate and University Management Board. Meetings by these two (2) important Organs of the University were happening without any known schedule; agenda items were not

communicated beforehand resulting in ineffective meetings because the concerned officers did not prepare at all. Contrary to the best corporate governance practices, minutes of meetings are rarely presented during subsequent meetings and are seldom confirmed and signed.

Another shocker was the lack of a performance tracking and reporting tool at TU-K. I have already availed the tool and instructed the Director of Planning and Performance Management to deploy it to monitor staff performance on a Quarterly basis. The Tool is meant to ensure set targets are effectively and efficiently monitored, evaluated, reported and the lessons learnt to form a basis of improvement in the subsequent quarters.

I was shocked by the amount of our research out-put. We have an impressive faculty complement comprising Professors, Associate Professors, Senior Lecturers and Lecturers with earned PhDs yet the research output is distressing to say the least. More shocking is the fact that currently there is very little money in the University bank account because there are very few ongoing funded research projects. Another bigger shocker is the fact that TU-K barely graduates more than 10 Masters and PhD candidates per year. Really? One is left wondering how some academics have been earning their promotions without sufficient evidence of supervision and research output. Things must change. Things will change!

**Q. Are there changes the University fraternity should expect?**

**A.** Oh Yes! Already some of the critical changes are underway. We are working hard to tame the runaway wage bill. I have been receiving telephone calls from distressed members of staff wondering when they are going to be

paid salaries. This is going to change. For instance, we are not renewing nor extending post-retirement contracts. We have made it clear to all concerned members of staff to exit when their time comes. Let us allow other Kenyans to serve. Nobody is irreplaceable. Let no one waste time appealing the decisions made on post-retirement contracts. In rare cases involving teaching staff contracts, a thorough evaluation must be conducted by a committee made up of staff within a given Faculty to ensure only dedicated and those with not-easy-to-get skills and experienced lecturers are given new contracts. There is a very clear criteria that has been developed to guide in renewal of contracts for staff especially the Graduate Assistants (GAs), Tutorial Fellows (TFs), Lecturers etc.

Future recruitments would strictly follow the law and the HR Policy and its attendant manuals. We shall be requiring that a Department raises a request after confirming a vacancy as per the staff establishment. The budget will have to be worked out, approved by relevant organs of the University, confirm availability of funds, advertise in at least two widely circulated newspapers countrywide, shortlisting, interviews done, before appointments are made. We shall ensure minutes are written, confirmed and signed at every stage. There shall be no shortcuts.

No student will be allowed to attend lectures and sit an examination without first clearing tuition fees as per the Fee Policy guidelines. Already the University has a huge debt owed by former students who graduated and collected their certificates without first clearing tuition fees. We have made it clear to lecturers who may be tempted to disregard the directive on zero fees balance and go ahead to teach and examine an ineligible student, that they will be held personally responsible and would be surcharged. Collection of

fees is not negotiable. In the public service, it is an offence not to collect fees for services being offered. I would not like to see a scenario where my members of staff will be asked by the Government to show-cause-why they should not be charged for their sins of omission or commission. Without collecting fees, we shall not be able to pay for utilities such as internet, water, electricity, security, among others.

**Q. As the captain, what is your strategy of steadying the ship?**

**A.** A plan is in place to ensure we do not sink. We need to stay afloat by living within our means. I have drawn my short-term strategic roadmap that I have already shared with the University Council. The strategy has clear activities, key performance indicators, deliverables and timelines. In the short term, we have put in place measures to ensure strict internal controls on financial management. Every payout must have schedules and all the necessary approval documents. We intend to carry out staff rationalisation and optimisation. In areas we will establish that there are more staff than required, duplication of roles and, depending on their qualifications and requisite experience, some members of staff would be moved to departments where they would be utilised well. Unfortunately, some redundancies would be declared and the excess staff will have to exit the University service. We are working hard to acquire a system that will integrate Procurement, Finance and Human Resource Management.

Initially the system may seem to be expensive but with time it will enable the University to save a lot of money. We are not just automating services but also integrating them. For instance, if a student pays tuition fees today, we should be able to generate a statement in real time. Currently it takes several days before we are able to confirm that fees have been paid. It is very frustrating to both staff and students. We are going to separate payroll management from Finance and domicile it in Human Resource Management office. Going forward, we are not going to procure goods and services without a procurement

plan and an approved budget. Finance must know what procurement is doing and vice-versa before committing the University in any way. Finance must also know what HRM is doing. All these will not be possible without an integrated system that can enable the three Departments seamlessly communicate to ensure resources are utilised as per approved plans, budgets and protocols.

**Q. What should the University fraternity expect in 2024?**

**A.** The Organisational Structure will change. We are not going to have most offices as currently constituted. The structure is top heavy, expensive to run and inefficient. In the new organisational structure, most directorates with duplicate functions will go while others will be merged and roles redefined. We are no longer going to have Schools. After a review, only productive Centres will be retained. We are going to have strong Departments domiciled in the existing three faculties. We are going to have Deans reporting to the Deputy Vice-Chancellor - Academic Affairs. The intention is to have a lean and efficient organisational structure with defined roles and clear reporting line.

**Q. Now that the University is in financial dire straits, what do you intend to do to improve the situation?**

**A.** TU-K has the necessary infrastructure and qualified, skilled and experienced staff that could commercialise the numerous research outputs and innovations we generate every year. One of my strategic focus areas is to embrace the principle of transforming research findings to products that could be commercialised. We need to realign our thinking to "Research to Commercialisation (R2C)". This will be done through establishing an Innovation Hub that will be used to nurture, incubate, develop prototypes and then commercialise the products. This will be a way of generating resources for the University in addition to repackaging the research outputs to impact the society.

To ensure sound and prudent management of research grants and funds, I have requested the University Council to facilitate the University

to have a stand-alone account that will "ring-fence" funds that are attracted to the University through research, innovation, consultancy and commercialisation. I have requested the University Management to train one staff member as a Grants Manager who will be responsible for research grants attracted to the University. Donor money that comes in the name of research grants must be used strictly for the intended project and reports submitted as per agreed timelines. The staff will be encouraged to write fundable proposals. According to terms of service, a lecturer spends 50 per cent of their time in teaching, 40 per cent in research and the remaining 10 per cent in performing administrative functions. We are going to start demanding that everyone accounts for his/her time accordingly. Research output will have to improve from the level it is currently.

Writing fundable proposals will be the only way one can get funds to conduct research and meet part of their academic obligations to the University. We need to embrace Digital Transformation in our Teaching, Learning and Research. We cannot afford to do things as we are doing currently. We need to adopt the "Square of Knowledge" where we have the four apexes representing: i. Teaching and Learning, ii. Research and Development; iii. Innovation and Technology Transfer; and iv. Research to Commercialisation (R2C). This will call for total commitment and paradigm change in our digital thinking. We need digital thinking to improve our institutional visibility, which will be achieved through open infrastructure such as the open science and dialogue.

**Q. Are there plans to Internationalise TU-K?**

**A.** Yes. We plan to establish an office to be in charge of linkages and international affairs. The office will be coordinating and managing all matters on staff and student mobility. I would like to see more staff and student exchange activities in TU-K. Apart from improved reputation internationally, regionally and even nationally, we shall have access to equipment and other resources for learning and research. TU-K researchers and

their counterparts from regional and international institutions will be able to develop joint fundable project proposals and carry out joint supervision of postgraduate students. Internationalisation of TU-K will give room to "cross pollination" of expertise, skills, experience, academic cultural mix and move away from academic inbreeding. The University will improve its international reputation, presence and even attract more postgraduate students from across the globe.

**Q. What's your work ethic?**

**A.** I follow rules and regulations. I follow policies and above all the law. Approved policies and guidelines for doing things ensure you stay the course. No room for deviation. I keep and use a what-to-do notebook. At the end of the day, I tick the tasks I have accomplished as set out in the morning. The ones I am unable to accomplish, I write them down on the page for the next day. This way, I am able to keep track and ensure work is done as planned. I like leading by example. My driving core value in all what I do is integrity. As I practice an open mind system, I encourage both staff and students to be people of integrity.

**Q. Do you have specific expectations about the TU-K staff and students?**

**A.** Yes I have a lot of expectations about everyone. The University will do everything possible to ensure staff motivation is at the highest level possible. In return for the University gesture, I expect every member of staff to do their job perfectly well. As parents, the members of staff must always endeavour to give the best service to our students. They must always adhere to the rules and regulations as per the terms and conditions of work they signed when they were recruited at TU-K. They must exhibit the highest level of integrity at all times when dealing with students, suppliers and visitors to the University. I expect students to be focused and attend to lectures and practicum, write assignments and examinations then graduate on schedule. The student leadership is free to engage management on matters of concern. We should all ensure that by the time a student graduates from here, they should be better citizens compared to the year they joined TU-K. We need to



produce holistic graduates where character will be of great concern rather than graduating students with First Class Honours but with no character.

**Q. What keeps you going?**

**A.** As a Christian, I believe the grace of God is sufficient. God's mercies are new every morning. I serve God by serving humanity the best way possible. I try as much as possible not to be conflicted in my work. I treat everyone equally and fairly. Integrity and fidelity to the rules of the game are my drivers. I am aware of the power of focus. Normally I am calm, firm and focused on everything I do. I always urge those I work with to be focused on their work and put on the table all cards - including the dangerous ones. I abhor colleagues who hide dangerous cards under the table to surprise me later. Let us be open to one another and consult with honesty. By so doing, we can achieve a lot for this great institution. In summary, as I step into the University every morning and look at the students and staff, I get the

urge that I need to do more to ensure that both achieve their potentials. This drives me to refocus my thinking. The need to improve the standards of TU-K keeps me awake as I think about two people - the staff and students' welfare. I feel that I must do something to change environment to be more conducive where every student and staff would like to stay.

**Q. Do you have any worklife fears or contradictions?**

**A.** Absolutely none. I like the saying that if you decide to swim, do not test the temperature of the water first before diving in. I have no political baggage nor patronage that may distract my focus. I believe in doing the right things the right way. The outcome of my work will speak for itself. I am passionate and committed. Yes I am new here but I am not new in the game. Let us make TU-K a centre of excellence. We are in very dynamic world and we cannot afford to be left behind. We must do everything that will attract students and staff to TU-K.

# TU-K SURGES IN PERFORMANCE



Mr Peter Kariuki from the Public Service Performance Management Unit hands the PC scoresheet to the Chairman of the University Council, Dr Idle Farah as a Council member, Hon. David Koech and the Vice-Chancellor, Prof Benedict Mutua look on.

The Technical University of Kenya surpassed its performance targets for the 2022/2023 performance contract period. This was disclosed after the conclusion of the Performance Contract evaluation exercise that was held in the University's Conference Room on Friday 22nd September 2023.

Mr Peter Kariuki and Ms Mary Lokoro, senior officers from the Public Service Performance Management Unit conducted the external evaluation on behalf of the Government and noted that TU-K had scored 100 per cent in most of its performance indicators.

The officers announced that TU-K had achieved a composite score of 2.8734 out of the possible score of 1.0. This was a huge improvement from the 3.5 composite score TU-K attained in the 2021/2022 performance Contract period.

Speaking after receiving the results from the evaluators, the Chairman of

the University Council, Dr Idle Farah congratulated the staff led by the Vice-Chancellor, Prof Benedict Mutua for the splendid job.

The VC said the University will work harder and do even better in the current PC period. "I am passionate about performance. I assure you we will surpass our target."

Prof Mutua congratulated the staff for having worked so hard to improve the service delivery to the public. He singled out Dr Agnes Gachau, the Director for Planning and Quality Management for diligently coordinating the staff and assembling the necessary documents as prove of the University performance.

Present during the evaluation exercise was Hon. David Koech, a member of the University Council, Deputy Vice-Chancellors, Prof Paul Wambua and Prof Alfred Orina as well as members of the University

Management Board.

The areas the University was evaluated on include:

- Financial stewardship;
- Implementation of Presidential directives;
- Service delivery;
- Core mandate (teaching, research and community service);
- Access to Government procurement opportunities;
- Promotion of local content in procurement; and
- Cross-cutting issues such as disability and gender mainstreaming, corruption, national values and HIV/Aids prevention, among others.

The performance contract period runs concurrently with the financial year that starts on 1st July through 30th June.

# PROMOTE AFRICAN KNOWLEDGE - VC

The Vice-Chancellor, Prof. Benedict Mutua, has challenged policy makers in Africa to embrace indigenous knowledge since it is an invaluable resource that holds the potential to address some of the most pressing global challenges. Prof. Mutua said this when he addressed participants during the third International Conference on Information and Knowledge Management held at a Nairobi hotel from 2nd to 6th October, 2023.

The conference theme was: Attaining Sustainable Development Goals through Indigenous Knowledge.

The VC said the conference was timely and relevant saying, "we gather here to explore this knowledge, it is essential to acknowledge the importance of respecting, preserving, and incorporating indigenous knowledge into our contemporary strategies for sustainable development."

He added that the preservation of traditional knowledge was not only a matter of cultural heritage but also a matter of planetary survival.

"The conference is a platform to delve deep into how indigenous knowledge systems can be harnessed to eradicate poverty to ensure clean water and sanitation; responsible consumption and production to promoting gender equality," said Prof Mutua.

He explained that the conference was one of the key academic events which played a pivotal role in fostering the realisation of TU-K's mission and vision captured in the motto: "Education and training for the real world."

The key note speaker, Prof. Elizabeth Kiondo from Tanzania, emphasised that indigenous knowledge has over the years empowered generations in their quest to address the numerous challenges they in their struggle to sustain their livelihoods.

She explained that indigenous knowledge has always been used to fight hunger, promote good health, maintain food security, increase agricultural productivity, manage natural resource and in conflict prevention and resolution.

"It has sustained livelihoods in the past and is still sustaining livelihoods today as current socio economic dynamics demand the continued use of this knowledge for sustainable livelihoods."

She said that local communities have time and again demonstrated resilience and power in the face of emerging challenges such as Covid-19 as well as climate change and related environmental disasters.

"When the world was looking for a



Scholars and experts follow proceedings during the International Conference.

global solution to the pandemic, some African countries invoked indigenous knowledge to counter the disease. In Tanzania, a steam of concoction of variety of herbs was used both as treatment and prevention measure. Tanzania never locked-down and the impact of the disease was minimal, thanks to the Indigenous knowledge and other related measures," she said.

Prof. Kiondo explained that when faced with issues that threaten their survival, people seek their own solutions, in their own languages, using indigenous knowledge and practices.

"Recently, I was invited by colleague to visit a traditional clinic which specialises in treating paralysis caused by strokes as well as broken bones through traditional healing methods. The doctor at the clinic learnt the trade from his grandmother and he is passing the knowledge to his peers at the clinic," she said adding that

**"We gather here to explore this knowledge. it is essential to acknowledge the importance of respecting, preserving, and incorporating indigenous knowledge into our contemporary strategies for sustainable development."-VC**

severe cases of patients healed through such treatment have been documented and more patients were attending the clinic after failing to get the right treatment in modern facilities, some of them due to high cost factors.

Prof. Kiondo elaborated on how globalisation was regarded as a threat to indigenous knowledge systems, saying that if not well preserved and protected, it can be pirated by other actors for their own benefit. In some cases she explained that there is a challenge of collective ownership of certain knowledge assets. She noted, "There have been some cases where African indigenous knowledge practices in arts and crafts have been pirated, reproduced and commercialised for the benefit of foreigners, therefore dispossessing the locals of their ownership. This also happens when big pharmaceuticals take advantage of medicinal plants that are part of indigenous knowledge and possess them for commercial gain without due acknowledgement." She questioned the law of Intellectual Property Rights (IPR) of indigenous knowledge adding that it should be at the fore-front, defending and protecting ownership of Indigenous Knowledge.

The conference brought together scholars and experts in various fields. It was organised by TU-K with support from the National Museums of Kenya, Natural Products Industry Initiative, African Population and Health Research Centre, Kenya Film Commission and the Kenya Commercial Bank.

# VC IN FIRST WHISTLE-STOP TOUR OF VARSITY SITES



The VC, Prof Benedict Mutua tours the construction site of I-Block



Prof Mutua plants a tree seedling at Kasarani Technical, Vocational College



The VC, Prof. Benedict Mutua and members of TU-K Management with Kasarani Technical and Vocational College Board of Management.

The Vice-Chancellor, Prof Benedict Mutua, on Friday 6<sup>th</sup> October 2023, made a whistle-stop tour of the University in what was his familiarisation exercise.

The VC officially took over the mantle of leadership on 18<sup>th</sup> September 2023 and up to 6<sup>th</sup> October, he had not had a chance to site-see the entire university.

The tour provided a unique opportunity for the top university leadership to witness first hand ongoing projects and address any pertinent concerns that may be existing.

The VC with his entourage visited the recently completed Block S and the two construction sites, for Block T and Block I. Other sites visited were the Women's hostels at Upper-Hill, Men's hostels at South B, South C site.

The VC concluded his tour by visiting the Kasarani Technical Vocational College (KTVC). The University supervised the design and construction as part of the Ministry of Education's Economic stimulus programme.

The TU-K team were joined by KTVC Board of Management in planting tree seedlings within the College.

KTVC Principal, Ms Josphine Begi, appreciated the tree planting gesture by the TU-K leadership adding that the trees will create a sustainable environment at the institution. Ms Begi explained that a partnership with TU-K would propel the institution to greater heights since it has a capacity to train and mentor youths in artisan certificate and diploma courses, thereafter transferring the students who wish to further their education to TU-K.

The VC assured the KTVC management that TU-K will continue to work with them to ensure the students get world-class hands-on training.

# STUDENT WINS FASHION TECH AWARD



Ms. Ivy Kendi with the VC, Prof. Benedict Mutua

Ms. Ivy Kendi, a 2<sup>nd</sup> year student from the School of Hospitality and Human Ecology, won the Fashion Technology Award at the WorldSkills Kenya, National Competitions and Innovation. The competition was held from the 28<sup>th</sup> August - 1<sup>st</sup> September 2023 at the Kenyatta International Conference Center, Nairobi. As a result, Ms. Kendi will represent the country in the WorldSkills International Competition set to take place in Lyon, France from September 10<sup>th</sup> - 15<sup>th</sup> 2024.

Ms Kendi's award was formally presented to the Vice-Chancellor, Prof. Benedict Mutua by Prof. Richard MakOpondo, the Director, School of Hospitality and Human Ecology in the presence of Mr. Chrisanto Akumu Owour, the Director, TVET Strategy and Development, Dr. Lucy Ciera, Academic Team Leader, Department of Fashion Clothing and Textile, Mrs Lucy Ouko, Mrs. Beatrice Misati, and Ms. Kendi.

The Vice-Chancellor applauded the team for this achievement, stating that he was always excited when it is about skills development for young people. He added that, when we nurture such young talents, we are not only

developing the university but also the whole world. He further stressed the importance of vocational training and assured Ms. Kendi of support from the management.

"I have been involved with students and I know what it means, as such I am happy that one of our students is going abroad. I want to assure you of support not just from your lecturers but also from the Management level," he said.

"Do not relax, this is the time to work harder to refine your skills. You should be exceptional. We want you to shine for the University and the country," he added.

Ms. Kendi said that the competition presented her with a unique opportunity to acquire and perfect

**"Do not relax, this is the time to work harder to refine your skills. You should be exceptional. We want you to shine for the University and the country" - Prof Mutua**

fashion and design skills within a short period of time.

This year's WorldSkills Kenya, National Competitions and Innovation, was organised by TVETA in collaboration with the Ministry of Education through EASTRIP Kenya Project, GIZ, Kenya National Chamber of Commerce and other partners. It was themed "Transforming the Future with the Power of Skills"

The National Skills Competition brings together young people, industry, government and education institutions to create linkages for collaboration in skills development. The event is a national platform for promotion and recognition of skilled people through TVET and their importance in achieving economic growth.

WorldSkills International holds skills competency competitions every two years in different parts of the world. It comprises of 85 Member countries and regions reaching two-thirds of the world's population while creating measurable impact at every level. Kenya was ratified as the 84<sup>th</sup> member in October 2020, and subsequently WorldSkills Kenya was established.

# ICT PS TIPS STUDENTS ON TECHNOLOGY



IEEE TU-K Patron Dr. Mary Ahuna gifts the Principal Secretary for Information, Communication, and the Digital Economy, Eng. John Tanui.



The Principal Secretary for Information, Communication, and the Digital Economy, Eng. John Tanui (2nd left) with DVC, IAE, Prof. Wambua (Left), Executive Dean, FEBE and Prof. Edwin Ataro (right), follow the proceedings during the Symposium.



Students with IEEE officials during the symposium.

Globalisation and changing trends are offering the youth a lot of opportunities for innovation, employment and socio-economic development.

The Principal Secretary in the Ministry of Information, Communications and the Digital Economy, Eng. John Tanui, urged university students to take advantage of the globalisation reality to earn a living.

The PS graced this year's Institute of Electrical and Electronics Engineers (IEEE) Industry Symposium at TU-K where he challenged students to venture into technology.

The TU-K IEEE chapter annual event brought together innovators,

industry players, engineering students and staff to share knowledge and experiences, explore collaborative research and innovative opportunities.

Institutional Advancement an Enterprise (IAE) DVC, Prof. Paul Wambua, Executive Dean of the

**The PS graced this year's Institute of Electrical and Electronics Engineers (IEEE) Industry Symposium at TU-K where he challenged students to venture into technology.**

Faculty of Engineering and the Built Environment, Prof. Edwin Ataro attended the ceremony.

The symposium, themed; Technological Advancements & Innovative Fields for a Sustainable and Digital Future, provided a platform for discussion on critical global trends. It showcased the pivotal role of technology in addressing challenges such as climate change and the rapidly growing digital economy, reinforcing the idea that technology is critical for positive change.

The event was organised by the IEEE TU-K students branch ambassadors, the executive committee with advice from Prof. Robert Jallang'o Akello and IEEE TU-K Patron Dr. Mary Ahuna.

# STUDENTS ATTEND EVENT IN ABU DHABI

Four students from the Department of Journalism and Mass Media attended the 2023 Global Media Congress event held in Abu Dhabi, United Arab Emirate (UAE).

The congress that took place mid-November, brought together global media practitioners, stakeholders, trainers and students. It was organised by the Emirates News Agency-WAM in collaboration with the Global Media Congress and was themed; "Global Initiative for Transition of Media Students into Media Persons."

The students included; Eric Njeru, Natasha Shisoka, Godfrey Wachira and Asna Rashid.

"As part of the initiative to equip media students with necessary skills and knowledge to succeed in the rapidly evolving media industry, 100 students undertaking coursework in communication and media in various universities and colleges worldwide were selected," said Asna Rashid, year student.

Areas of topical discussions ranged from; new technology, digital communication, artificial intelligence to media innovation. This extended to role of media in climate change, sports education among others.

Notable keynote speakers during the event included; Gavin Johnson, City Football Group Director, Taha Elsayed, Sky News Arabia Presenter, Chantal Saliba, Sara Al Refai, Abdul Waris, among others.

"We had a privilege of interacting with journalists, content creators, marketers, and technology innovators. Shaukat Piracha of AAJ Pakistan TV, based in



Islamabad was among the international journalists we exchanged thoughts with," said Eric Njeru.

"Amb. Dr. Muhammad Shahid Amin Khan was particularly impressed by TU-K and promised to visit for collaborative initiatives" Godfrey Wachira said.

"I had the privilege of connecting with professionals in media industry including countries like; UAE, USA, Mexico, Gabon, Tanzania, Zimbabwe, Kenya, Pakistan, Japan, Russia, and Germany," Erick Macharia said.

He added: "Beyond the intellectually

stimulating panel discussions, insightful keynote speeches, and interactive workshops at ADNEC, the congress provided a holistic cultural immersion. The Sheikh Zayed Festival offered a glimpse into Arabian traditions, from delectable cuisine to traditional attire."

"I had a chance to meet with H. E. Ambassador Dr. Muhammad Shahid Amin Khan, the 4th World Chairman of the International Human Rights Commission who shared insights on the critical role media plays in human rights," Natasha Shisoka said.



Journalism and Media student Natasha Shisoka, with H.E Dr. Muhammad Shahid Amin Khan, 4<sup>th</sup> World Chairman of the IHRC during the congress.



Journalism and Mass Media who attended 2023 Global Media Congress Held in Abu Dhabi, United Arab Emirate (UAE). From left Erick Macharia Njeru, Asna Rashid, Natasha Shisoka and Godfrey Wachira.

# FRENCH EMBASSY TO SCALE UP COLLABORATION WITH TU-K



A delegation from French Embassy in Nairobi led by Dr. Mathieu Guerin, the Attaché for Science and Higher Education, with members of the University Management Board, led by Prof. Paul Shiundu.

The French Embassy in Nairobi has reaffirmed the French Government's support to the collaborative projects with the Technical University of Kenya.

This was disclosed on 4<sup>th</sup> July 2023 when a delegation from the French Embassy in Nairobi paid a courtesy call on the VC to strengthen the ongoing cooperation between TU-K and the French Government.

The ongoing projects are in areas of collaborative research and innovation and student exchange programme that includes English and French language assistants. Other areas are; the joint development of double degree curricula with French universities, strengthening TVET programmes, students' scholarships, internships, and staff training.

The team from the Embassy was led by Dr. Mathieu Guerin, the Attaché for Science and Higher Education and Deputy Head of Cooperation in Kenya, Denis Sainte-Marie, Attaché Counselor for Cooperation and Cultural Affairs and Mr. Benard Clouteau, the Attaché Linguistic Cooperation.

The delegation was hosted by the Ag. Vice-Chancellor, Prof. Paul Shiundu. Also present during the meeting were the DVC-RTD, Prof. Isaac Orina, DVC-



Ag. VC. Prof. Paul Shiundu (right) chats with the delegation from French Embassy in Nairobi led by Dr. Mathieu Guerin, the Attaché for Science and Higher Education

IAE, Prof. Paul Wambua, Executive Dean-FSST, Prof. Peter Matu, Executive Dean-FAST, Prof. Francis Gatheri, Executive Dean-FEBE, Prof. Edwin Ataro, Prof. Benard Odera- Director, CEP-TF and Dr. Teresa A. Otieno, ATL-DMCL. Also present were some of the students who have in the past benefited from the collaboration.

Dr. Otieno disclosed that a BA in French (Minor and Major) curriculum was being developed and will soon be subjected to the institutional approval

procedure before prospective students are invited to apply for admission. She said initially the BA in French will be offered to students pursuing Hospitality Management and those pursuing International Relations.

"We are reaching out to colleagues in other departments to deliberate on the possibility of designing the curricula that will give our students an opportunity to learn French to give them a niche in the fast-changing job market.



VC Prof. Benedict Mutua (4<sup>th</sup> left), DVC Prof. Paul Wambua (3<sup>rd</sup> right), Dr. Teresa Atieno Otieno (3<sup>rd</sup> left), ATL Modern and Classical Languages, with some of the students travelling to France.



Dr. Teresa Atieno Otieno, ATL Modern and Classical Languages, when she introduced the French students to the VC.



The VC, Prof. Benedict Mutua (right), DVC, Prof. Paul Wambua, Dr. Teresa Atieno Otieno (2<sup>nd</sup> right), interacts with one of the student.

## 24 STUDENTS PICKED TO TEACH ENGLISH IN FRANCE

24 students in various disciplines are set to travel to France to teach English in different learning institutions. This is part of French and Kenyan Governments' exchange programme where Language Assistants from Kenya have opportunities to teach English in France while French Assistants get to teach French in Kenya.

Through this programme, TU-K has benefitted having sent a total of 37 students in five cohorts. In each cohort, the students spent seven months teaching English in France.

TU-K has so far hosted three French Language Assistants. "We have 14

students who were lucky to have their contracts renewed and they have already travelled. We also have other 10 students traveling for the first time to France," Dr. Teresa Atieno Otieno, said.

Dr. Otieno is the Academic Team Leader, Modern and Classical Languages and TU-K coordinator of the programme. Some of the Language Assistants have been lucky to have their contracts renewed even for the third time, while others have secured scholarship opportunities to study for Masters' degrees in France.

Three students from the university have also secured job opportunities at

the French Embassy in Nairobi. They are; Cyril Savai, Sylvia Ndwiga and Audrey Nakhatama

The VC, Prof. Benedict Mutua, met some of the students travelling and expressed his excitement and challenged them to be good ambassadors of the University and at the same time network for more opportunities.

The VC, flanked by the Deputy Vice-Chancellor in charge of Institutional Advancement and Enterprise, Prof. Paul Wambua, met the students and presented them with certificates.

# STUDENTS SHOWCASE INSPIRED DESIGNS

Third year diploma students from the Department of Fashion, Clothing and Textiles recently showcased their inspired designs as a part of their final year projects in an 'All-black and white with a highlight of color'- themed fashion show extravaganza at the University.

The red carpet runway was set to exude elegance and class as the models exhibited each student's designs. The young fashion designers presented a collection exhibiting inspired storylines, diverse cultures, passion,

nature, occasions and celebrities.

The event was facilitated by Lecturers from the Department including Ms. Ruth Yole and Lillian Mwende with support from Director, School Hospitality and Human Ecology, Prof. Richard Makopondo. Some of the invited guests were from the Kenya Fashion Awards and Nairobi College of Garment Production.

Dr. Mary Clare Kidenda applauded staff and students and urged them to attempt cross-cutting designs from the African continent as well as from

other parts of the world.

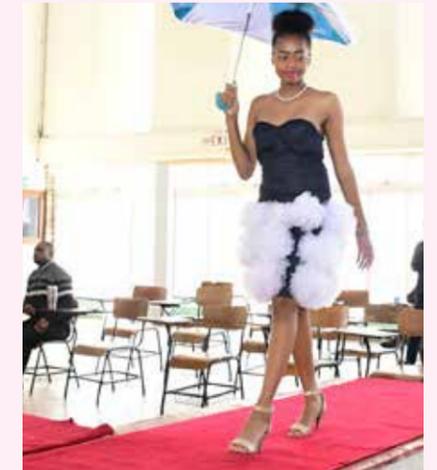
Prof. Makopondo hailed the students' effort and participation in the event, noting that such activities were highly encouraged as they would place students in best positions for job opportunities as well as self-employment. The Director also advised the young designers to take advantage of the Government's Youth Development Fund during the upcoming entrepreneurs funding round to set up design ventures.



Prof. Richard Makopondo, Director, School Hospitality and Human Ecology (right) with some of the teaching staff during the exhibition



Models showcase some of the designs



# PROF. SHIUNDU RALLIES ACADEMICS TO PUBLISH LOCAL JOURNALS

The Acting Vice-Chancellor, Prof. Paul Shiundu, has urged University academics and researchers to collaborate and set-up TU-K journal. He was speaking during the grand opening of the University's library e-resource center, and launch of the MyLOFT - My Library on Fingertips.

"This is an appropriate challenge, because starting a journal might be easy, however, sustaining it requires a team effort," he said "Nonetheless we must remember that even reputable journals had humble beginnings. Therefore, we must work together, to achieve this goal," he echoed.

Prof. Shiundu further stressed that the journal will enhance academicians' capacities to publish their research findings and also improve University's webometric rankings.

In addition to setting up the journal, the Ag. VC was impressed by the transformation of the library e-resource center and the resources it provides its users.

"The learning landscape is now dominated by electronic devices and this e-resource center will play a pivotal role in making the University a research-intensive institution," he stressed.



Ag. Vice-Chancellor, Prof. Paul Shiundu, launching MyLOFT - My Library of Fingertips platform at the University library.

**"The learning landscape is now dominated by electronic devices and this e-resource center will play a pivotal role in making the University a research-intensive institution." -Prof. Shiundu**

"Furthermore, the e-resource center will go a long way in training TU-K staff in e-resource literacy and promote exploitation of e-resources," he added.

Prof. Shiundu further stated that he was humbled to officiate the launch of the e-resource center and thanked members of staff, particularly Mr. Harrison Amwayi, a Senior Technologist in the Directorate of Information and Communication Technology and seven Industry Based Learning (IBL) students who worked under the leadership of the Director, Library and Learning Resource Service, Dr. Sarah Kibugi. The team worked together to network the computers, refurbishing and mobilising resources to not just give the lab a magnificent outlook but also ensure that it had all the valuable resources it needed.

"It has been a long and tedious journey, and each one of us has the potential to achieve what has been achieved in this lab," he said.

During her opening remarks, Dr. Sarah Kibugi said there had been a growing demand for unconventional learning and access to information. Despite the availability of several online resources, unfortunately not



MyLOFT Representative - Off Campus Access, Mr. Sila Too, hands over tokens to FEBE Executive Dean, Prof. Edwin Ataro (left), DVC - Research and Technology Development, Prof. Alfred Orina Isaac (center), DVC in charge of Institutional Advancement and Enterprise, Prof. Paul Wambua (right).

every student and staff had access to laptops get this information. To bridge this gap, the e-resource center is 'a world of discovery to millions of information resources.'

To furnish the library, Dr. Kibugi emphasised that they leveraged on partnerships and donations to supplement the limited resources. Key among the partners was the Kenya Library and Information Services Consortium whose support had enabled library users to access resources available in other university libraries across the country.

"We further sourced for a donation of 105 computers and 10 projectors from World Communicators for Change, USA and shared the computers with other departments in the University. So far, we have given out 45 computers and 7 projectors," she said.

"At the same time, the library sourced for donation of books from "Textbooks for Change, Canada," where we received 24,000 books. About 1,591 books have been distributed to different schools within the University to establish or enhance departmental libraries," she added.

MyLOFT Representative (Off Campus Access), Mr. Sila Too, said their resources also cater for low bandwidth users who may not have access to the internet, allowing them



Mr. Francis Ng'ang'a demonstrates how MyLOFT works

**"There has been a growing demand for unconventional learning and access to information. Despite the availability of several online resources, unfortunately not every student and staff have access to laptops to get the information..." -Dr. Kibugi**

to still have access to these resources at their convenience.

Prof. Paul Wambua, Deputy Vice-Chancellor in charge of Institutional Advancement and Enterprise said that when a section of the University shines, the whole University shone. He further urged research to leverage on partnerships to achieve institutional milestones.

Prof. Alfred Orina Isaac, Deputy Vice-Chancellor in charge of Research and Technology Development said that one of the most valuable resource for academicians was to sit quietly and read which the library had achieved.



Dr. Agnes Gachau, in September 2023, when she graduated with a doctorate in Business Administration from Business School, Netherlands University of Applied Science.

# BIOLOGICAL AND LIFE SCIENCES STUDENTS SHOWCASE INGENUOUS INNOVATIONS



Students from the Department of Biochemistry and Biotechnology and the Department of Applied Technical Biology showcase their projects to guests from Kenya National Chamber of Commerce and Industry including Head of Trade Development, Mr. Kassim Were and TU-K's DVC - Research and Technology Development.

The School of Biological and Life Sciences (SBL) students held the 2<sup>nd</sup> Science Exhibition themed; "Innovation and Technology." The students were tasked with showcasing and explaining their scientific projects in line with the theme of the exhibition.

The exhibition was part of the students' Industrial Based Attachment (IBL) that attracted students from the Department of Biochemistry and Biotechnology and the Department of Applied Technical Biology who came up with innovative solutions to contemporary socio-economic challenges.

Among the invited guests were the Kenya National Chamber of Commerce and Industry Head of Trade Development, Mr. Kassim Were, Deputy Vice-Chancellor - Research and Technology Development, Prof. Alfred Orina, Executive Dean, Faculty of Applied Sciences and Technology - Prof. Francis Gatheri, Director School of Biological and Life Sciences - Prof. Dorcas Yole and lecturers.

Mr. Were urged the students to avoid rushing into the industry without having acquired the necessary skills challenging them to take time to further their education and equip themselves with the requisite skills. He noted that he was prepared to offer the best TU-K



Some of the products developed by students

students job opportunities as well as gift the best students from that exhibition as an appreciation for hard work.

"When you go for your attachments, try to establish a social network because they will come in handy when looking for a job," he noted. "The industry only takes the best, so use your time here at the University wisely," he added.

Prof. Orina, appreciated the School for a well-organised exhibition. He applauded

the lecturers for the good exposure they give to their students which enables them hone their skills. Prof. Orina advised the students to improve their soft skills such as communication skills, interpersonal skills, people skills and so on, pointing out that industry prefers people with such skills.

"Take advantage of this opportunity, it is given to you so that you can practice the technical skills you have acquired



Development of edible oyster mushroom kit for small scale farmers and urban populations in Kenya



Production of biodiesel from sunflower oil (Beta Diesel)

over the years," said Prof. Orina. He further noted that the University fully supports students in what they do and expects them to go out and conquer the world.

Prof. Francis Gatheri, the Executive Dean- Faculty of Applied Sciences and Technology, advised the students to get more innovative, adding that they could utilise such opportunities to launch their future careers by upgrading the simple projects presented during the exhibition. He appreciated the School's lecturers and students for their innovative skills exhibited through the student's projects.

There were ten exhibiting teams, each with its own project including;

1. Embracing entomophagy by white grub consumption to guarantee food security (Nutrigrabflour).
2. Hydroponic system as an alternative to conventional farming.
3. Development of edible oyster mushroom kit for small scale farmers and urban populations in Kenya
4. Development of Garlic extract bio pesticide for sustainable crop protection.
5. Lactic acid production from food waste using Escherichia Coli for food preservation
6. Compost manure enriched with rabbit urine (compost fix)
7. Biopesticide from Azadiractin and Pyrethrin to enhance food security
8. Production of biodiesel from sunflower oil (Beta Diesel)
9. The preservative effect of pawpaw (Carica papaya) extract on Beef
10. Fish Preservative from synergy of lemon grass and banana peel extracts



Biofuel



Pesticide from Azadiractin and Pyrethrin to enhance food security

# VARSITY HOLDS TRAINING ON COMMERCIALISATION OF RESEARCH

The Deputy Vice-Chancellor, Research and Technology Development, Prof. Alfred Orina Isaac, has challenged university researchers to bridge the research knowledge gap by working closely with Small and Medium Enterprises. He was speaking during a Training of Trainers (ToT) for lecturers from the School of Business and Management Studies.

“As a university, we conduct good research work but it doesn’t get to the Small and Medium Enterprises (SME), who need this knowledge to upscale their businesses. As such, we are excited about this training, whose objectives is to inform and bridge the knowledge gap as well as to start an innovation hub,” he said.

Prof. Orina emphasised that TU-K is a special university with a special mandate. Due to its technical nature, the University is expected to offer practical-oriented training to foster both economic and social development. This is particularly relevant for students studying Bachelor of Technology programmes that are offered from Bachelor’s degree to Master’s degree level. During their research, students are expected to develop research concepts which seek to identify and solve challenges in society.

He also invited the visiting team to tour the University’s facilities to familiarise themselves with the available state-of-the-art equipment.

“Business people thrive on images, that is what they see, so that they make up their mind on what they want. We hope that through the tour we will be able to collaborate more in terms of equipment and machinery,” he said. He added that the training will help the University in developing content and help partners to learn how to present their innovations in a professional manner.”

The 5-day ToT sought to provide training, coaching and mentorship to researchers as well as innovators so that they are able to commercialise their innovations. The training is funded by The Research and Innovation Systems for Africa (RISA) Fund. This is a multi-country project funded by the UK, through the Foreign, Commonwealth and Development Office (FCDO) which



Participants follow proceedings during the TOT



Mark Lawler, Team Lead, The Research and Innovation Systems for Africa (RISA) Fund addresses participants.

seeks to strengthen research and innovation systems in Africa. Prof. Orina concluded by thanking The Research and Innovation Systems for Africa (RISA) for funding the Project adding that the University looked forward to further collaboration. Mark Lawler, Team Lead, RISA said that he was impressed by the commitment demonstrated by the University in undertaking the training which was crucial to the work they do. “This is central to the work that we do, and the best part is that the training will be integrated in the curriculum,” he added

Stephen Gugu, Co-Founder, Viktoria Ventures, said that for the last ten (10) years, their organisation has been working with researchers with a view to commercialising their innovations. He

invited participants to join their monthly webinars to learn different skills on the commercialisation process.

Stephen gave a few success stories, one that involved Safi Power; a renewable energy company that helps hotels, institutions and manufacturing industries to reduce expenses on electricity by installing solar power. He was impressed that former TU-K students were a part of the Project.

“We see this as a transformative process because the knowledge that we are providing will reach the students to enable them not to just solve real life problems but also provide better, faster and efficient solutions,” he concluded. This training was facilitated by Viktoria Ventures, in partnership with The Kenya National Innovation Agency.

# RESEARCH EFFORTS COMMENDED



Prof. Dorington Ogoi, Chair of TUK-Institutional Scientific and Ethics Review Committee receives certificate from Ag. VC Prof. Paul Shiundu.



Jane Atieno Owino Bukahi (left) receives a certificate from Prof. Paul Shiundu.

The Acting Vice-Chancellor, Prof. Paul Shiundu, has assured researchers at the University of his full support to ensure TU-K achieves its mandate in research. The Ag.VC said the University was working towards excellence in matters research citing indicators that had placed TU-K among top-rated universities in Kenya. This includes the July Webometrics Rankings that overall placed TU-K at position eight in Kenya.

Prof. Shiundu was speaking when he presented certificates to members of the newly established TU-K Institutional Ethics Review Committee (IERC) who had just completed training at the Kenya Medical Research Institute (KEMRI). The Committee is mandated to review research proposals and post approval monitoring within local and international policy and regulatory frameworks.

He underscored challenges that hold back research efforts among them

management of research and financial constraints implementation of research activities as well as proposal writing for funding. “As an institution, we must create a good environment for researchers and I will ensure this comes to life. This is because there are things that I do not wish to see done same way they were done in the past, so that we remove all the barriers that researchers encounter,” Prof. Shiundu noted.

The Ag. VC added that the TU-K IERC team should borrow best practices to ensure best management of research in areas of finance appropriation and ensure it trickles down to execution. While recognising diversity of the University Ethics Committee, Prof. Alfred Orina, DVC, Research and Technology Development, who was present during the ceremony, challenged the team to move a step up from the current University standings.

“TU-K is ranked top among the youngest universities in Kenya; as a newly established Committee we need to open avenues for collaborations and expertise exchange to handle the task ahead,” Prof. Orina noted. Committee Chairman, Prof. Dorington Okeyo Ogoi, at the same time called on the University to set up a dedicated Secretariat to ensure efficiency of the Committee.

Members of the Committee include Dorington Okeyo Ogoi (Chairman), Elizabeth Ajema Chebichi Luvai, John Nyiro Mwero, Evans Vidija Sagwa, Okoko Argwings Kodhek, Lucy Mudiwo Ombaka, Isaac Mokaya Omwenga, Melissa Wangui Wanjiru, Gladys Akelo Otieno, Jillani Ngalla (Institute of Primate Studies), John Geoffrey Ng’ang’a, Jane Atieno Owino Bukachi, George Muriithi Ndeng’era, Benard Nashon Otieno (Secretariat) and Isaac Maina (Secretariat).



Members of the newly established TU-K Institutional Ethics Review Committee (IERC) with Prof. Paul Shiundu (second right) and DVC Prof. Alfred Orina (centre)

## RESEARCH INSTITUTIONS CRITICAL IN LEATHER INDUSTRY GROWTH

The leather industry processing players have challenged learning institutions to redesign training and research on leather production and consumption to match the rising demand for professionals and advanced production technology.

Kenya Tanners Association Chairman, Mr. Robert Njoka, said leather processing industry has a shortage of trained leather processing professionals including mechanical technicians to run and maintain plant machinery. Mr. Njoka was speaking during a two-day 1<sup>st</sup> Workshop on Eco-Tanning Processes in Kenya and the East African Region organised by the Technical University of Kenya (TU-K) in collaboration with State Department for Livestock Development (SDL), Tanners Association of Kenya (TAK) and United Nations Conference on Trade and Development (UNCTAD).

"The leather industry is emerging in Kenya; we, however, have a shortage of professionals because we source for technicians from India to maintain machinery," Mr. Njoka noted.

He challenged learning institutions to reach out to the leather industry players to help in identifying critical training needs. He indicated that they were willing to contribute to the development of curricula and policies in the industry from time-to-time.

This comes even as the Government embarks on concerted efforts to revitalise local leather industry through value addition and production of end products. Currently, a lot of processed leather is exported. Through Bottom-up Economic Transformation Agenda (BETA) 2022-2027, the Government has identified priority intervention areas in the leather value chain, and is committed to set up more common effluent treatment plants and leather industry clusters in Athi River, Narok, Isiolo, Wajir, Nakuru, Kisumu, Eldoret and Mariakani, and to secure linkages with local and overseas markets.

In his speech, read by Mr. Joseph Mbogo, Director, Leather Development in Kenya, the PS, Department of Livestock, Mr. Jonathan Mueke, said the Government will in the next two years ban importation of shoes to boost local leather industry.

"The sector's significance in the country's economic growth has been further emphasised by President William Ruto's pronouncement which set a target for the industry to produce 15 million pairs of back-to-school shoes and proposed a ban on shoe imports within two years," Mr. Mueke noted.



The Eco-Tanning Processes in Kenya and the East African Region delegates

Currently, there are 13 registered tanneries operating in Kenya, with an estimated annual installed capacity of 31,440 and 15,600,000 tons of hides and skins respectively exporting raw pelts, or semi-processed wet blue and crust leather with little or no value addition that meets international green standards.

The PS said the State Department For Livestock Development had identified challenges facing the leather industry including; poor quality of raw material, limited capacity of tanners, lack of appropriate green technologies, high cost of production, poor skills and inappropriate production technologies, quality compliance, weak legal and impeding regulatory framework and unpredictable fiscal/taxation environment at national and regional levels that may hinder the sector's competitiveness and growth.

Through stakeholder engagement, the

**"The sector's significance in the country's economic growth has been further emphasised by President William Ruto's pronouncement which set a target for the industry to produce 15 million pairs of back-to-school shoes and proposed a ban on shoe imports within two years." – Mr. Mueke**

Government has therefore set up step-up strategies. Such workshops help in building capacity and provide training from Government agencies to stakeholders, the private sector, and academia on proper strategies geared towards integrating and implementing green sustainable manufacturing processes and supply chain that meet the standards and certification criteria set out by international leather working groups," the PS said.

The Acting Vice-Chancellor, Prof. Paul Shiundu, expressed his excitement on the positive engagement between learning and research institutions, government agencies, industry players and other stakeholders. Prof. Shiundu noted that the deliberations will ensure the sector sets an upward trajectory, providing a viable socio-economic growth environment and providing job and research opportunities for continuing students and graduates. Prof. Shiundu also made a presentation on Innovative enzymatic removal and recovery of hair from a pelt (Beamhouses processes).

Mr. Glen Wilson, UNCTAD, Elzette Henshilwood, South North (SSN), Mr. Ivan Král, United Nations Industrial Development Organisation (UNIDO) and Dr. Dominic Menjo – Presidential Economic Advisor (Head of Agriculture Sector) also gave presentations during the two-day workshop.

The Workshop was coordinated by Dr. George Okwadha from TU-K and Dr. Richard Oruko Ongong' from the Directorate of Veterinary Services with assistance from Ms. Marygoretty Chepng'etich, Dr. Henry J.O. Ogola, Kimari Wamaitha and Mr. Robert Njoka.

## PHYSICS MASTER'S STUDENTS IN SPAIN ON RESEARCH EXCHANGE



Master's in Physics students, Mr. Stephen Chege Mbugua (front right) and Mr. Bill Clinton Oyomo (front left) with Director, School of Physics and Earth Sciences, Prof. George Amolo, and teaching staff at the Department and some students. The two have won a scholarship to carry out research in Spain.

Two TU-K Master's students carrying out research on electric structure work have won an exchange research fund to visit the University of Cantabria in Spain where they will meet scholars and experience research culture in their area of study.

Mr. Stephen Chege Mbugua and Mr. Bill Clinton Oyomo who are studying Master's in Physics benefited from a TU-K and the University of Cantabria collaboration that will see them spend five months in Spain where they will conduct collaborative research on predictive simulation and understanding of properties and materials.

The duo who recently graduated

from TU-K with Bachelor of Technology in Technical and Applied Physics will also access laboratories and equipment critical in their research.

Mr. Mbugua is carrying out research on thermo-electronic properties and optical properties. "This study will lead to efforts in establishing ways of minimising loss of energy in properties, and would be beneficial in a wide range of appliances," Mr. Mbugua noted. This is an advancement of his undergraduate project; 'origin of band inversion in topology – Bismuth Selenide (Bi<sub>2</sub>Se<sub>3</sub>)'. To carry out his study, he needs to access an open source computational code called Siesta (Spanish Initiative for

Electronic Structure with Thousands of Atoms).

Mr. Oyomo is conducting a study in thermoelectronic of properties on tin selenide from first principles calculations. "This simply means a focus in an investigation of conversion of heat to electricity," Mr. Oyomo said. He will be using an open source code called Quantum Espresso.

"The reason why we conduct such computational calculations in material science is to help predict properties of materials using these codes; in this sense, technological production of material is improved," Oyomo added.

The Director, School of Physics and Earth Sciences, Prof. George Amolo, said the cooperation through universities' networking group called ASESMA (African School on Electronic Structure Methods and Applications) has also seen Mr. James Sifuna, who is pursuing his PhD studies at TU-K, benefit from the collaboration.

The Director noted that Prof. Javier Junquera, who is the lead collaborator from the University of Cantabria, will soon be visiting TU-K on the research exchange, while Dr. Mike Atambo and Dr. Gladys Kingori, are also scheduled to visit the University of Cantabria mid next year on the training programme.



Master's in Physics students at TU-K Mr. Stephen Chege Mbugua and Mr. Bill Clinton Oyomo who a scholarship to carry out research in Spain.

# COMPUTING GIANT OFFERS TU-K DONS RESEARCH RESOURCES

The Center for Higher Performance Computing (CHPC) has assured TU-K researchers that they will continue enjoying access to high profile computing resources to enable them conduct more focused research. This was disclosed by Werner Janse Van Rensburg, the CHPC Research Manager, when he spoke to scientists and engineers during a visit to the University in July 2023.

The objective of the visit was to meet the researchers who use CHPC resources, receive feedback on user experiences to the resources provided, understand some of the research activities being conducted as well as gather users' needs.

CHPC is an organisation that is funded by South Africa's Government's Department of Science and Innovation (DSI). It is part of the Square Kilometer Array Project (SKA) which Kenya is involved in. This partnership enables Kenyan researchers to have access to resources at CHPC.

"The SKA project is a multi-national project that involves radio astronomy research. Many countries are part of it with South Africa and Australia hosting the two largest radio telescope arrays," said Mr. Rensburg.

"Kenya is one of the eight countries involved in the project which forms the basis of this collaboration," he added.

CHPC has been keen on supporting researchers to conduct more focused research that involves modeling and simulation by giving them access to high-speed, high-bandwidth connectivity, and the effective curation of a variety of notably large and critical databases.

"When it comes to this project, there is a tremendous need for computer and data analysis and we recognise that the computational capacity of researchers needs to be developed so that more countries can be part of this," said Rensburg.

He encouraged other researchers even those not studying astronomy to use CHPC resources. This will



Werner Janse Van Rensburg (center), Research Manager led a delegation from the Center for Higher Performance Computing (CHPC), South Africa on an outreach visit to speak scientists and engineers at TU-K about their high computing resources. On the left is Prof. George Amollo, Director, School of Physics and Earth Sciences.

be achieved by forming groups and identifying a Principal Investigator to register which will enable those under their teams to have access to their resources.

"This has been going on for many years and Kenya is particularly doing well, currently we have 27 Principal Investigators who are actively using our resources," he added.

Researchers from the University are a prominent group making use of the CHPC computing resources. One group, led by Principal Investigator Prof. George Amollo from the School of Physics and Earth Sciences is using CHPC resources by employing

**"This research will support a multidisciplinary approach to the existing potential of studying complex physical, chemical and biological systems that characterises current and emerging challenges in our society." Prof Amollo**

basic principles of Physics to predict material properties.

"This is a Kenyan special interest group that conducts research studies on Computational Modeling and Materials Science, said Prof Amollo.

"This research will support a multi-disciplinary approach to the existing potential of studying complex physical, chemical and biological systems, among others, that characterises current and emerging challenges in our society," Prof. Amollo added.

Dr. Michael Atambo, also a Lecturer in the School of Physics and Earth Sciences added that the support provided by CHPC was key in making their predictions.

"We want to predict how the material interacts with light, how hard the material is, its structure, and electronic properties," said Dr. Atambo.

CHPC was encouraged to support more young researchers to advance their skills and experiences in order to carry on with the research work in the future.



Prof. Francis Gatheri, Executive Dean, Faculty of Applied Sciences and Technology, giving wise counsel to the workshop attendees.

## 'BUILD BY SAFARICOM' EVENT HELD

Safaricom Engineering Community in partnership with the School of Computing and Information Technology on the 29<sup>th</sup> September, 2023, conducted a "Build by Safaricom" sensitisation workshop. The workshop officially set off a one-year acceleration programme that will see engineering students, and those undertaking computing and information technology gain professional capacity in Data Engineering, particularly in the fields of Artificial Intelligence (AI), Machine Learning and Data Engineering.

During the workshop, the students were taken through different sessions where they were taught how to create innovative start-ups in the field of artificial intelligence. That was followed by a live demo on how to feed algorithms in AI and Machine Learning. In addition, the students were taught how to transform raw data in actionable insights. That was followed by a live demo on building data pipes for seamless data flow.

Dr. Njeri Ngaruiya, TU-K Build by Safaricom Program Coordinator said that the partnership is a huge boost to the university in bridging the unemployment gap.

"Such models will help reduce the unemployment burden by giving students internship opportunities.

This is because giving students potent technical skills while they are still in school, prepares them to meet the demands of the industry, hence allowing them to smoothly transition into employment," said Dr. Ngaruiya.

Following the workshop, students will be signed-up to a one-year accelerated program where the 20 best students will be granted internship positions while the other 80 students will be in an off-taker database that will be visible to other big tech companies which can absorb them.

Mr. Kamau Maina, Big Data & CVM Tech Delivery Lead at Safaricom PLC, stressed that the partnership seeks to identify students who can look at a problem and come up with innovative solutions.

"If you are looking to get employed or start a company, being able to crystallise a problem and come up with a solution gives you a competitive advantage," said Mr. Maina.

He further added that the Build by Safaricom program also seeks to introduce students to new careers like prompt engineering which has become popular since the emergence of Artificial Intelligence. Additionally, the program seeks to build the students social cues as well as enhance their

critical thinking.

The workshop was graced by the heads various Faculties including, Prof. Francis Gatheri, Executive Dean, Faculty of Applied Sciences and Technology and Prof Edwin Ataro, Executive Dean, Faculty of Engineering and the Built Technology. Also in attendance was Prof. Salesio Kuria, Director, School of computing and Information Technologies.



Kamau Maina, Big Data & CVM Tech Delivery Lead, Safaricom PLC, makes a presentation during the "Build by Safaricom" workshop.

# UCL STUDENT LEADERS ON A MISSION TO TU-K

A team of visiting student leaders from University College, London (UCL) is exploring collaborative ways with the Student Association of Technical University of Kenya counterparts (SATUK) in areas of students' involvement in community service and learning.

The delegation led by Simon To, Director of Policy and Governance at UCL noted that they are keen on sharing best practices with SATUK leadership on opportunities students can take advantage of through community service and volunteering.

The team highlighted a successful approach where students at UCL offer solutions to organisations through community service under a programme dubbed Social Hackathon. In exchange, students understand society's needs, get grounding on their research, as well as learn consultancy and entrepreneurship opportunities.

"We invite organisations to tell us their challenges and provide them with students through Social Hackathon who work with them for a period of one to two years. During this period, the students carry out community research and dissertation initiatives inspired by social issues," said Dr. Anne Laybourne, UCL Head of Volunteering.

During their one-week stay, UCL guests met the University Management, interacted with SATUK officials and also had an opportunity to meet student leaders from other universities in Kenya.

Some of the topical areas they delved into include establishing world class standards for best practices in student leadership, resource sustainability



Simon To, Director of Policy and Governance at UCL speaking to TU-K University Management and SATUK Leaders.

for effective student engagement, democracy and electoral practices in students' unions. The team was also scheduled to hold joint charity events including tree planting at TU-K's Men's Hostels.

The Acting Vice-Chancellor, Prof. Paul Shiundu, who addressed the joint forum expressed his excitement about the collaboration, highlighting that such learning and exchange of ideas nullifies the traditional and outdated confrontational approaches of student leadership in universities.

"Such moments and interaction on international level is one of a kind; it builds an excellent culture of dialogue, all-inclusive leadership and calibrates

**"We invite organisations to tell us their challenges and provide them with students through Social Hackathon who work with them for a period of one to two years."**

**– Dr. Anne Laybourne**



Visiting UCL guests pose for a picture with the SATUK Leaders and University Management led by DVC, Prof. Alfred Orina (5<sup>th</sup> left)

good governance, empowerment and good reputation," said the Ag. VC.

Prof. Shiundu noted that TU-K would be a hub for best student leadership in East Africa and UCL would form part of the facilitating partners. SATUK has since been ranked the best students' union in Kenya. He also commended the outgoing VC, Prof. Francis Aduol, for supporting the exchange initiative that saw SATUK leaders travel to UCL on similar learning mission focusing structural and operational standards of student leadership in the UK.

The Deputy Vice-Chancellor, Research and Technology Development, Prof. Alfred Orina, on his part praised SATUK for best leadership practices and challenged the members of the student body to adopt global practices such as community service model undertaken by UCL.

Other University senior staff present during the joint address ceremony included Prof. Francis Gatheri, Executive Dean, Faculty of Applied Sciences and Technology, Prof. Peter Matu, Executive Dean, Faculty of Social Sciences and Technology, Prof. Edwin Ataro, Executive Dean, Faculty of Engineering and the Built Environment, Prof. Omondi Oketch, Director, Students Welfare and Support Services (SWSS), Mr. Cosmas Kanyadudi, Ambassador for the Association of Commonwealth Universities (ACU) and Dr. Ali Adan, Senior Assistant Registrar in the Directorate of Students Welfare and Support Services.



UCL leaders at a Workshop with SATUK leaders



SATUK Chairman, Muchoki Kirera (left) and Mr. Cosmas Kanyadudi, the TU-K contact person for the Association of Commonwealth Universities (ACU) receive a gift from UCL guests



Dean of Students, Prof. Omondi Oketch (3<sup>rd</sup> left) and Ag. VC Prof. Paul Shiundu (right) receive gifts from the visiting UCL guests.



# SCHOOL OF INFORMATION PARTNERS WITH THE UNIVERSITY OF ILLINOIS



The group poses for a photo outside the library



Professor Clara Chu being shown part of the library resources at TU-K

The School of Information and Social Studies at the Technical University of Kenya (TU-K) is exploring opportunities for academic and professional development collaboration with the Mortenson Center of International Library Programs at the University of Illinois, Urbana-Champaign.

In this regard, the Director of the School, Professor Tom Kwanya, held discussions with Clara Chu, a distinguished Professor and Director of the Mortenson Center who visited the University on 17<sup>th</sup> July 2023.

The two explored opportunities for collaborative research particularly on emerging technologies in information spaces such as artificial intelligence and robotics. Through this, the School will join and benefit from existing multi-disciplinary and multi-country collaborative research partnerships. This will help to improve research excellence and visibility through access to research capacity development, mentorship, and funding.

The institutions also considered staff and student exchange programs. These will contribute to the School's efforts to internationalise and benchmark its programs in order to attain world-class standards. The exchanges will also provide opportunities for collaborative

projects on emerging issues of mutual interest.

Professor Chu, who is also a former President of the Association for Library and Information Science Education as well as the Association for Information Science and Technology, also shared insights on curricula development. She drew from her experience as a co-developer of the Guidelines for Professional Library and Information Science Education Programmes under the International Federation of Library Associations and Institutions (IFLA).

The Professor also visited the TU-K Library and held discussions with the

Director, Library and Learning Resource Services, Dr. Sarah Kibugi. They discussed opportunities for advanced professional development training at the Mortenson Center. This is a three-week non-degree program that focuses on developing library and information science professionals into library leaders and innovators. Participants in the program get to learn about novel and innovative library services and practices; explore current trends and issues in the discipline; network with international colleagues and experts; tour progressive libraries in the USA; and cultivate appropriate leadership skills.



Director, Library and Learning Resources, Dr. Sarah Kibugi, discuss with Professor Clara Chu, Director of the Mortenson Center of International Library Programmes at the University of Illinois Urbana-Champaign. Looking on are Prof. Tom Kwanya (second right) and a section of library staff.

# TU-K AND ORACLE ACADEMY PARTNERS

TU-K in partnership with Oracle Academy have prepared a program that will provide students and educators with the much required resources and training in the field of computer science, database and other technological skills for advancement of the future workforce.

This came during an event held at TU-K that sought to sensitise students from the School of Computing and Information Technologies on learning resources and the networking opportunities Oracle Academy has to offer.

The event was attended by The Deputy Vice Chancellor- Research and Technology Development, Professor Alfred Orina, the Director School of Computing and Information Technologies, Professor, Salesio Kiura, Oracle Academy Program Manager, Sub-Saharan Africa, Ms. Lorna Juma and the Executive Accountant- Oracle Academy, Ms. Laureen Kimathi.

Prof. Orina acknowledged TU-K's computing resources and capabilities as the largest in the country thus producing experts who are in high performance computing areas. He added that the students joining the program will have an added advantage to from its certification. "Oracle Academy will prepare our students for the real world and provide them with opportunities for professional certification," he said.

Ms. Lorna Juma gave a brief introduction on the objectives of Oracle Academy, stating that it is a global philanthropic educational program by Oracle Corporation which aims at advancing technology, education, skills,



Laureen Kimathi; Account Executive, Oracle



Lorna Juma; Manager, Oracle Sub-Saharan Africa

innovation, diversity, and inclusion. The academy provides resources and training to educators and students worldwide to help them develop skills in computer science, database, and other technologies.

She further explained the several benefits that both the educators and students will have after completing the program in the academy. Such benefits included access to learning resources, oracle certification learning materials, world-class teaching and learning resources, networking opportunities and free membership for educational institutions and individual learners. Ms. Lorna added that the Academy offers internship programs to students which will help them gain hands-on experience with Oracle Technologies and Practical skills. The academy also collaborates with educators and learners in both private and public institutions through agreements to provide the tools and training educators need to engage,

inspire and prepare students to become technology innovators and leaders of the future.

Ms. Laureen, enlightened the students on who a {Gen O} is in the academy. The term Oracle Gen O as stated by Laureen, appears to refer to a career development program called Generation Oracle offered by Oracle. The Oracle Gen career development program provides opportunities for individuals to grow and advance in their careers in the program that runs for twelve months.

The overwhelming turnout, positive feedback received, enthusiasm of attendees, and the hard work of the organisers all came together to create an unforgettable experience. The impact of this event will be felt for a long time to come as students gained valuable insights, forged meaningful connections and acquired skills that will shape their future success.



Dr. Agnes Gachau, Director Planning and Performance Management, Prof. Salesio Kiura, Director School of Computing and Information Technology and Prof. Alfred Orina, Deputy Vice-Chancellor follow proceedings.



A participant makes a presentation during the workshop at S-Block.

## MITIGATING FOOD INSECURITY THROUGH CRUNCHING OF BIG DATA

The Government will soon be able to take informed and responsive measures to address food insecurity in good time through analysing Earth Observation data. This was unveiled during a recent capacity-building workshop to share the preliminary outputs of a collaborative project named 'Remote sensing and modelling to assess crop-specific response to climate stressors.' The one (1) year food security project that is on-going in Busia County is a pilot study that seeks to predict the effects of climate change on cropping systems, and crop yield, so as to allow key decision makers such as the Government and other key stakeholders to make informed decisions to mitigate the impacts of climate shocks.

The Project, funded by European Space Agency under EO Africa Research and Development Facility, is being implemented by the University's School of Surveying in partnership with The Leibniz Centre

for Agricultural Landscape Research (ZALF). Prof. Hussein Farah from the School of Surveying and Geospatial Sciences who is also the Project's Principal Investigator, said that Kenya is a drought prone country and experiences heat stress which results in widespread hunger and biodiversity loss. To address this problem, the Project tries to address food security challenges in the country by using survey, remote sensing and mapping to periodically monitor the growth of crops.

"By taking satellite pictures we are able to monitor the harvest, and predict the yields. Such information is important for the Government as well as various stakeholders in planning on different food security measures. For example, if the yields are not good enough, the government can plan in advance for imports and ensure food security for its people," said Prof. Hussein Farah.

Dr. Gohar Ghazaryan, the European

Co-Principal Investigator from ZALF, said "This is a pilot project in Busia, and I will be very happy if it results to the development of long term partnerships. This is also a wonderful opportunity for students to learn from each other and experts in the field as well as gain useful research skills," she said.

About 20 participants attended the training, majority being researchers drawn from the Department of Geoscience and Earth Sciences and the Department of Resource Surveys and Remote Sensing in the School of Surveying and Geospatial Sciences as well as students from the School. Other participants were from the Regional Center for Mapping of Resources for Development and the International Centre for Insect Physiology and Ecology (ICIPE).

"The main purpose of the workshop is to share the preliminary outputs with stakeholders, and provide training to researchers on the data and tools we are using," said Dr. Francis Oloo, the Ag. Director, School of Surveying and Geospatial Sciences and the Project's Researcher - Geographic Information Systems.

"The training aims at bringing them up to speed with the dynamic technology for mapping, especially on remote sensing and how to link it to crop modeling," added Dr. Oloo.

Dr. Pamela Ochungo, the Project's Researcher - Remote sensing also attended the workshop.



Workshop participants

## TU-K 8<sup>TH</sup> IN GLOBAL RANKINGS

The Technical University of Kenya was listed among the top ten universities in Kenya in the latest Webometrics university rankings in July 2023. The University secured the 8<sup>th</sup> spot out of 124 universities in Kenya. TU-K was ranked 3,865 out of 11,989 institutions worldwide and 173 out of 2,064 African institutions.

The "Webometrics Ranking of World Universities" is an initiative of the Cybermetrics Lab which aims at promoting scientific research in order to improve the progress of the scientific and technological levels of a country. The webometrics rankings are based on three parameters; impact, openness (transparency) and excellence. Impact accounts for 50% of the ranking, excellence covers 40% and transparency or openness takes up 10%.

Impact refers to the number of external networks which have cited works of the institution via back links

to the institution's website. By this metric, TU-K was placed 16th in Kenya. Excellence focuses on the number of papers cited among the top 10% most cited papers in each discipline. The University was ranked 7th in Kenya on excellence. Finally, the transparency or openness ranking is based on the number of citations of public works by the top 310 researchers in an institution (excluding the top 20), based on their public profiles on Google Scholar. This parameter accounts for 10% of the Webometric scores. In this regard, TU-K was placed 6<sup>th</sup> in Kenya, a position that was held both in the January and July 2023 rankings. The number of citations that were recorded in July were 21162, a marked increase from 14412 citations in January 2023.

In Kenya, The University of Nairobi took the top spot in the Webometrics overall ranking. Following were Kenyatta University, Jomo Kenyatta University

of Agriculture and Technology, Egerton University and Moi University at positions two, three, four and five respectively. Maseno University took the sixth place, Strathmore University emerged seventh, the Technical University of Kenya clinched position eight and Masinde Muliru University of Science and Technology and Catholic University of East Africa took positions nine and ten respectively.

The ICT Directorate, Directorate of Research and Knowledge Exchange as well as the Library and Learning Resource Service, in support of scholarly excellence, regularly train staff and students to provide support in their publication journey. The University recently launched an e-resource centre at the University Library which allows users to access online information resources at their convenience, with or without internet.

## UNIVERSITY DIGITISES APPRAISALS

The Directorate of Human Resource Management (HRM) is currently digitising the staff performance management and appraisal process. The Directorate in partnership with the Directorate of Information and Communication Technology (ICT) has developed a digital platform for this purpose. The two Directorates carried out a training to members of staff from various Schools and Administrative units on how to effectively navigate and use the digital performance management and appraisal platform. The trainees are expected to disseminate this knowledge to their colleagues and offer support to their respective Departments/Units.



Staff from the Directorate of Human Resource Management (HRM) led by the Director, Mr Kihoro Magu (left) and selected members of staff from other departments attend digital appraisal training.

# ENGINEERING STUDENTS WIN SCHOLARSHIPS TO STUDY IN CHINA

Three students from the School of Mechanical and Manufacturing Engineering (SMME) have won scholarships to study in China after emerging top in the 2023 Africa Tech Challenge (ATC) Season 8 that attracted competitors from 9 countries.

Samuel Irungu, David Mwangi and Victor Ngumbau Mue won the top challenge award, the 'Study in China Scholarship.' "This award is always given to top three offline winners and top three online winners," stated a report prepared by Ag. Director, School of Mechanical and Manufacturing Engineering (SMME), Dr. Fredrick Mutua.

Three other students from various universities and colleges in the continent also won the scholarship award. Several other students from TU-K won more than 10 awards in individual and team categories in the ATC challenge sponsored by AVIC International Holding Corporation.

The competition offered two majors - CNC Lathe Machining and Computer Aided Design (CAD) Software Application. CNC Lathe Machining competition was held offline in Kenya at TU-K from 24<sup>th</sup> July 2023.

During the same time, the Mechanical Drawing and CAD Software Application competition was held online through the AVIC Vocational Education Online Platform where participants were trained within their respective countries. This year's competition registered 83 teams of 332 participants (65 online & 18 offline) from nine countries including Kenya, Cote d'Ivoire, Egypt, Gabon, Ghana, Uganda, Tanzania, Zambia, and Zimbabwe.

TU-K teams that participated in the event and won several awards included:

1<sup>st</sup> place in group award for Mechanical Drawing and CAD Software Application (students David Mwangi, Mercy Wanjiru, Samuel Irungu, and Team Leader Arthur Owuor).

1<sup>st</sup> place in group award for CNC Lathe Machining (students Victor Ngumbau Mue, Kennedy Karingithi Mathenge, Boniface Nyutu Gitau and

Team Leader Thomas Joseph Embuga). Excellence award in Mechanical Drawing and CAD Software Application, won by Samuel Irungu.

1<sup>st</sup> place individual award in CNC Lathe Machining, won by Victor Ngumbau Mue.

2<sup>nd</sup> place individual award for Mechanical Drawing and CAD Software Application, won by Samuel Irungu.

3<sup>rd</sup> place individual award for Mechanical Drawing and CAD Software Application, won by David Mwangi.

4<sup>th</sup> place individual award for Mechanical Drawing and CAD Software Application award, won by Mercy Wanjiru.

5<sup>th</sup> place individual award in CNC Lathe Machining, won by Kennedy

Karingithi Mathenge.

'Karibu Kenya' award, presented to Technical University of Kenya as the host institution.

Kenya's Deputy President, Rigathi Gachagua, who represented the President William Ruto during the award ceremony in Nairobi affirmed Kenya's commitment in upholding good bilateral relations with her partners.

The Deputy President lauded AVIC International for the ATC program acknowledging that it plays a key role in enhancing technical skills for technical students in Kenya. He noted that the skills will immensely help to reduce unemployment and poverty index levels in the country through innovation and entrepreneurship.



Dr. Esther Muoria, PS, State Department for Technical, Vocational Education and Training watches as Deputy President Rigathi Gachagua presents a certificate to one of the participants

Hon. Gachagua further urged the youth to take advantage of the youth-driven ICT potential to leverage innovations in artificial intelligence, robotics and other technologies to enhance productivity and competitiveness.

Other guests who graced the awards ceremony included Minister Counsellor, People's Republic of China, Permanent Secretary of TVET, Kenya, Minister of Education, Uganda, Deputy Secretary General of China Education Association for International Exchange and Vice President of AVIC International Holdings Corporation.



Five of the top six students from various universities in the continent including 3 students from TU-K (Samuel Irungu, David Mwangi and Victor Ngumbau Mue) who won scholarships to study in China.



Prof. Paul Wambua, FEBE Executive Dean, Prof. Edwin Ataro, Chief Representative of AVIC International in Kenya, Mr. Ma Chengyuan, Permanent Secretary, State Department for Technical, Vocational Education and Training in the Ministry of Education, Dr. Esther Thaara Muoria, Ag. Vice-Chancellor, Prof. Paul Shiundu, DVC - Research and Technology Development, Prof. Alfred Orina, School of Mechanical and Manufacturing Engineering Director, Dr. Fredrick Mutua and TVET Director, CT. Akumu, during the launch of Africa Tech Challenge Season 8.



Participants pose for a group photo after completion of the challenge

# EBK ACCREDITS ENGINEERING COURSES



Members of the Engineers Board of Kenya (EBK) led by the Chairman, Eng. Erastus Mwongera, with members of the University Management when they held A consultative meeting at TU-K.



Engineers Board of Kenya (EBK) Chairman, Eng. Erastus Mwongera (right), Board Registrar and CEO, Eng. Margaret Ogai (centre) with other members of the board when they visited the university.



Engineers Board of Kenya (EBK) has granted accreditation of five engineering programmes at the Technical University of Kenya. EBK Registrar and Chief Executive Officer, Eng. Margaret N. Ogai in a letter addressed to the Vice-Chancellor, Prof. Benedict Mutua, announced that five Engineering programmes at TU-K are now accredited after a rigorous evaluation of the programmes to ensure they meet local and international standards.

The letter communicated the Board's decision of its 191<sup>st</sup> Ordinary

Board Meeting held on 8<sup>th</sup> August, 2023 recognising the following five programmes:

- i. Bachelor of Engineering (Electrical and Electronic Engineering)
- ii. Bachelor of Engineering (Civil Engineering)
- iii. Bachelor of Engineering (Mechanical Engineering)
- iv. Bachelor of Engineering (Biosystems and Environmental Engineering)
- v. Bachelor of Engineering (Chemical Engineering)

Following the accreditation, the University is expected to submit various progression documentations including; a report on how to address identified gaps, staff recruitment and development plan, staff mentorship programme for professional registration, student mentorship programme, Memoranda of Understanding for carrying out practicals in other institutions and an equipment upgrade plan.

# GENDER-THEMED VISUAL CULTURE EXPO TO BE HELD IN SOUTH AFRICA

Ingenious expression and interpretation of gender themes emerged in an exhibition dubbed 'Exploring Visual Culture (EVC),' a project that brings together institutions in Africa and Germany.

The Technical University of Kenya participated in a two-day exhibition at Kenyatta University (KU) that culminated in an online exhibition from 19<sup>th</sup> to 20<sup>th</sup> September, 2023 at the University of Pretoria, South Africa. The University of Nairobi and Kenyatta University also participated in the physical exhibition at KU.

Various institutions and universities from Kenya, South Africa, Cameroon, Ghana, and Germany participated in the online exhibition on September, 2023.

The Exploring Visual Culture project sought to present stories on gender matters from different parts of the world and encouraged the young generation to recite their understanding and interpretation through artworks manifested in any medium of choice.

Dr. MaryClare Kidenda, the Academic Team Leader in the Department of Design and Creative Media, said, "The Technical University of Kenya is a member of EVC project, an open and transnational network of



Dr. Mary Clare Kidenda, the Academic Team Leader, Department of Design and Creative Media (center) with Jane Otieno (left), Lecturer at the Department take a look at some of the projects exhibited at Kenyatta University (KU)

scholars, artists, teachers from field of art education, art, visual culture studies, culture and anthropology."

"EVC draws its membership from universities, museums and non-governmental organisations (NGOs) from various countries including Ghana, Cameroon, Kenya, South Africa, Greece and Germany. Individual experts and artists come from Brazil, Japan, Hong Kong,

China, Nigeria, Great Britain, Iran and Canada," she added.

EVC project also takes a closer look at visual objects like architecture, logos, artworks, photos, fashion among others and looks for answers in transnational dialogues between artists, educators, historians, anthropologists and students.



Some of the exhibitors showcase their projects



DVC, Prof Paul Wambua, when he addressed the soon-to- retire members of staff. He represented the VC, Prof Benedict Mutua.

## VC COUNSELS SOON-TO-RETIRE STAFF

The Vice-Chancellor, Prof. Benedict Mutua, has applauded the members of staff preparing to retire soon from the service of the University.

“You have done a great job with limited resources to bring the institution to its current status where it is among the top ten universities in the country. There is a lot to learn from your efforts and for this, we sincerely appreciate you,” said the VC in a speech read on his behalf by the Deputy Vice-Chancellor - Institutional Advancement and Enterprise (IAE), Prof. Paul Wambua, when he opened a pre-retirement training for staff due to retire in the years 2023, 2024 and 2025 organised by the Directorate of Human Resource Management.

The VC also applauded the staff for upgrading themselves while working for the University. He noted that some joined without higher qualifications, but along the way, acquired them.

“As you leave, some of you have great memories of the institution, carrying along with you a lot of history of Kenya Poly and now TUK,” he said advising them to keep their networks intact.

“The networks you made should

not be dissolved. Continue with friendships and links so far created to establish valuable activities wherever you will settle.”

He thanked the Directorate of Human Resource Management for organising the exercise noting that the training was very important.

“The team assembled to talk to you has a rich reservoir of knowledge gained from carrying out similar activities over many years, hence will be of great benefit to you.”

Prof. Wambua echoed the VC’s statement adding that retirement is inevitable and challenged the retirees to forge ahead and think of what to do after retirement.

He noted that engaging in activities such as tree planting, business and many others will enable them plan

**“The team assembled to talk to you has a rich reservoir of knowledge gained from carrying out similar activity over many years, hence will be of great benefit to you.”**

their time well, keep them active and therefore keep happy after retirement.

The participants were also informed about the roles of Octagon Africa as the scheme trustee, CPF as the scheme administrator, among other actors. The training also covered the following areas, health and well-being, financial planning, investment options and emotional and psychological aspects of a retiree.

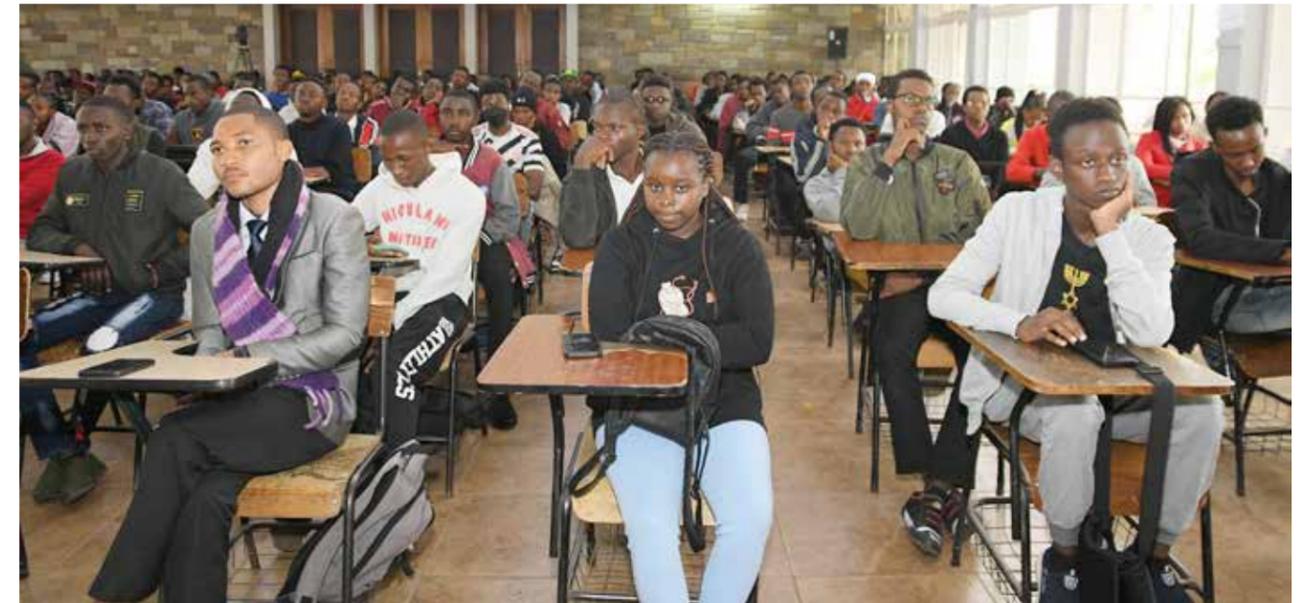
The three day training programme was held at TU-K’s Samsung Laboratory.

Sixty four members of staff were trained. Out of this number, 19 are retiring by December 2023 while 23 and 22 will exit in 2024 and 2025 respectively.

The objective of the training, was to smoothen the transition from work into retirement and make it a more enjoyable experience.

The training is a requirement by the Public Service Commission for Compliance with the National Values and Principles as articulated in Articles 10 and 232 of the Constitution of Kenya, 2010.

## FRESHERS ADVISED ON CAMPUS LIFE



First year students follow proceedings during orientation

The Ag. Vice Chancellor, Prof. Paul Shiundu has emphasised TU-K’s quality of education highlighting practical aspects imparted on students. Prof. Shiundu said TU-K was keen on producing graduates who have a strong skills base, ready for the job market, and also can venture into entrepreneurship.

“At TU-K, we do not only produce consumers, we produce producers,” Prof. Shiundu said.

The Ag. VC was speaking at end of the one-week orientation of over 2,000 first year students who just joined TU-K. He expressed excitement that TU-K remains the university of choice for students as majority of those who were placed by KUCCPS had their first choice of university as TU-K.

“It is exciting for us to admit you today after making a deliberate and conscious decision to join TU-K; over 90% of the vacancies we declared were taken as the first choice,” Prof. Shiundu noted.

He further indicated that only 100 students expressed interest to leave TU-K through inter-institutional transfer while over 300 students who had been admitted in other universities expressed interest in joining TU-K.

Prof. Shiundu also announced that

various engineering programmes at TU-K had been accredited by the Engineers Board of Kenya (EBK). He also commended students and staff for participating in the just concluded Africa Tech Challenge (ATC) Season 8 and topping in the competition that brought together competitors from technical training institutions from nine (9) countries in Africa. The Challenge focused on Mechanical Drawing and Computer Aided Design (CAD) Software Application.

Prof. Shiundu at the same time challenged the freshers to consider themselves fortunate to join TU-K and asked them to work hard to uphold the University’s call in ‘Training for the Real World’.

“Each one of you should put effort to attain excellence, you now represent the University’s foundation, values and purpose,” Prof. Shiundu noted.

**“Each one of you should put effort to attain excellence, you now represent the University’s foundation, values and purpose.” – Prof. Shiundu**

He told the students to exercise self discipline, humility and ensure they were always in secure environment during their stay at TU-K.

“At the University, you have freedom to exercise what you deem right, freedom of intellect and freedom of association; exercise it responsibly,” he concluded.

The Deputy Vice-Chancellor, Institutional Advancement and Enterprise, Prof. Paul Wambua, challenged the freshers to immediately plan for their careers as soon as they got to class, noting that this will shape their mindsets and efforts in their class work.

“All of you are aware of the competition for job opportunities in this country. Ensure from your first test you score well; employers will be looking out for your grades in your transcripts. Attend all your classes, no one is out there to police you, but note that class attendance counts in your overall exams,” Prof. Wambua noted.

The Deputy Vice-Chancellor, Research and Technology Development, Prof. Alfred Orina was among other top University Management, faculty and senior university staff present during the VC’s address to the first years.



# Uraia

Kenya's National Civic Education Programme

Ministry of Interior and Coordination of National Government  
Directorate of National Cohesion and Values



## NATIONAL VALUES AND PRINCIPLES OF GOVERNANCE

National Values and Principles of Governance are the fundamental beliefs of our nation, guiding the choices, actions and behaviour of all Kenyans.



Our Values, Our Heritage, Our Destiny

## Why the Promotion of National Values & Principles of Governance?



Promotion of the National Values and Principles of Governance will achieve the necessary socio-cultural, economic and political transformation that is key to the timely realization of the country's development agenda

## What are the National Values and Principles of Governance?

Article 10 of the Constitution outlines the following as the National Values and Principles of Governance:

- 1) **Patriotism** - Loyalty to, love for, pride in my country.
- 2) **National unity** - working together in harmony for the realisation of common goals.
- 3) **Sharing and devolution of power** - A system in which resources and power are distributed between and among the national and county level governments.
- 4) **The rule of law** - Adherence to the law by all persons.
- 5) **Democracy and participation of the people** - Active involvement of people in decision making on matters that affect them.
- 6) **Human dignity** - respect and ethical treatment for every human being.
- 7) **Equity** - The quality of being reasonable, fair, impartial and just in all decisions and actions.
- 8) **Social justice** - fair provision and access to essential services, opportunities, and privileges within a society.
- 9) **Inclusiveness** - Affording all persons an opportunity to participate in community activities that affect their lives.
- 10) **Equality** - Treatment of everyone with the same measure irrespective of their status such as gender, religion, social class, tribe or race.
- 11) **Human rights** - They are the basic rights and freedoms that are entitled to every person.
- 12) **Non-discrimination** - Treatment of people without bias irrespective of their diversities.
- 13) **Protection of the marginalised** - Safeguarding the interests of the disadvantaged.
- 14) **Good governance** - Having systems and structures through which the exercise of power and authority can be controlled or held to account.
- 15) **Integrity** - Consistently doing what is right regardless of the circumstances.

- 16) **Transparency and accountability** - Transparency is openness and sharing of timely and accurate information. Accountability is taking responsibility for one's actions and decisions.
- 17) **Sustainable development** - A pattern of resource use that aims to meet the needs of the present without compromising the ability of future generations to meet their needs.

### What are the benefits of National Values & Principles of Governance?

- National values create a strong sense of belonging, pride and national identity.
- National values promote harmonious coexistence among diverse groups in society.
- The values contribute to effective representation and development of virtuous leadership.
- The values lead to equitable allocation of resources and opportunities at national and county levels reducing socio-economic inequalities.
- The values promote and protect human rights and fundamental freedoms for all.
- The values enhance promotion of open, accountable and participatory management of public resources.
- The values guarantee availability of resources and opportunities for future generations.



Uraia  
Kenya's National Civic Education Programme

Ministry of Interior and Coordination of National Government  
Directorate of National Cohesion and Values  
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Facebook: cohesion.go.ke | Twitter: @cohesion\_values



# THE TECHNICAL UNIVERSITY OF KENYA

## MODULE II PROGRAMMES UNDERGRADUATE AND DIPLOMA

STARTING JULY 2023



**T**HE Technical University of Kenya (TU-K) is the leading university in technological education and training in Kenya. The University was awarded a Charter in 2013, making it a fully-fledged 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 student upward movement policy, which makes it easy for students to move from one level of training to the next, and recognise prior training by awarding students credit transfers. The University has developed and implemented a digitised and completely paperless student applications process; from application to registration. Students are therefore, advised to make their applications on-line for the programmes listed below:

| COURSE TITLE  | REQUIREMENTS  | DURATION                                    |
|---|---|---|
| <b>FACULTY OF ENGINEERING AND THE BUILT ENVIRONMENT</b>   |   |   |
| <b>SCHOOL OF ARCHITECTURE AND SPATIAL PLANNING</b>  |   |   |
| Bachelor of Architectural Studies/<br>Bachelor of Architecture  | • KCSE Mean Grade C+ (plus), with C+ in Mathematics, C+ in Physics, and C+ in English/Kiswahili   | 4 years (BAS); 2 years (B.Arch.) Integrated |
| Diploma in Technology (Architecture)  | • KCSE Mean Grade C, with C in Mathematics, C in Physics and C in English/Kiswahili   | 3 years (Integrated)                        |
| <b>SCHOOL OF AEROSPACE AND VEHICLE ENGINEERING</b>  |   |   |
| Bachelor of Engineering (Aeronautical Engineering)  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics, C+ (Plus) in Chemistry and C+ (Plus) in Eng./Kis.  | 5 years (Integrated)                        |
| Diploma in Technology (Aeronautical Engineering Technology)   | • KCSE Mean Grade C (plain) with C- (minus) in Maths A, C in Physics, C in Chemistry and C in Eng./Kis.   | 3 years (Integrated)                        |
| Diploma in Technology (Mechanical Engineering Technology): Automotive and Autotronic Engineering option | • KCSE Mean Grade C (plain) with C- (minus) in Maths A, C- (minus) in Physics, C- (minus) in Chemistry and C- (minus) in Eng./Kis.  | 3 years (Integrated)                        |
| <b>SCHOOL OF CHEMICAL AND BIOLOGICAL SYSTEM ENGINEERING</b>   |   |   |
| Bachelor of Engineering in Biosystems and Environmental Engineering                                     | • KCSE Overall minimum mean grade C+ with Mathematics C+, Physics C+, Chemistry C+, Biology = C, English = C+ OR<br>• A level Minimum 2 principals in Mathematics and Physics; Subsidiary in Chemistry; and Credit pass in English and Biology at O level | 5 years (Integrated)                        |
| Bachelor of Engineering (Chemical Engineering)  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics, C+ (Plus) in Chemistry and C+ (Plus) in Eng./Kis.  | 5 years (Integrated)                        |
| Bachelor of Engineering Technology (Chemical Engineering Technology)                                    | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Chemical Engineering Technology or equivalent   | 3 years (Part-time)                         |
| Diploma in Technology (Chemical Engineering Technology)   | • KCSE Mean Grade C (Plain) with at least C- (minus) in Maths A, Physics, Chemistry and English/Kiswahili   | 3 years (Integrated)                        |
| <b>SCHOOL OF CONSTRUCTION AND PROPERTY STUDIES</b>  |   |   |
| Bachelor of Built Environment (Construction Management)   | • KCSE Mean Grade C+ (plus), with C+ in Mathematics and C+ in Physics   | 4 years (Integrated programme)              |

Integrated programmes will be taught during the day on weekdays together with Government-sponsored students  
Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE                                    | REQUIREMENTS   | DURATION  |
|---|--|---|
| Bachelor of Quantity Surveying                  | • Diploma in Technology in Quantity Surveying, Building Construction, Civil Engineering, Architecture with a credit pass and KCSE Mean Grade C- (Minus) OR<br>• TEP Diploma in Building Construction, Civil Engineering, Architecture, Quantity Surveying or equivalent with at least 2 years relevant work experience, with a credit pass and Mean Grade C- (Minus) | 3 years (Part-time)                                   |
| Bachelor of Real Estate                         | • KCSE Mean Grade C+ (plus), with C+ in Mathematics and pass in Physics OR<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Real Estate or equivalent or TEP Diploma in the above areas, with a Credit pass.   | 4 years (Integrated programme)<br>3 years (Part-time) |
| Diploma in Technology (Real Estate)             | • KCSE Mean Grade C (Plain) together with at least C- (minus) in Maths and pass in Physics   | 3 years (Integrated programmes)                       |
| Diploma in Technology (Quantity Surveying)      | • KCSE Mean Grade C (Plain) together with C (plain) in Maths, Physics and Eng./Kis.  |   |
| Diploma in Technology (Construction Management) | • KCSE Mean Grade C (Plain) together with C- (minus) in Maths, Physics and Eng./Kis.   |   |
| Diploma in Technology (Building Construction)   | • KCSE Mean Grade C (Plain) together with C- (minus) in Maths, Physics and Eng./Kis.   |   |
| <b>SCHOOL OF CIVIL AND RESOURCE ENGINEERING</b> |  |   |
| Bachelor of Engineering (Civil Engineering)     | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics, C+ (Plus) in Chemistry and C+ (Plus) in Eng./Kis.   | 5 years (Integrated programme)                        |

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Part-time programmes will be taught in the evenings and on weekends

CONTINUED

| COURSE TITLE   | REQUIREMENTS  | DURATION   |
|--|---|--|
| Bachelor of Engineering Technology (Civil Engineering)   | • KCSE Mean Grade C- (Minus) and Diploma in Technology in either: Civil Engineering, Highway Engineering, Water Engineering, Building Construction or equivalent or TEP Diploma in the above areas,   | 3 years (Part-time)  |
| Diploma in Technology (Civil Engineering)  | • KCSE Mean Grade C (Plain) with at least C- (minus) in Maths, Physics, Chemistry and English/Kiswahili OR<br>• Certificate in Civil or Water Engineering, with KCSE Mean Grade D+  | 3 years (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, C+ (Plus) in Physics, C+ (Plus) in Chemistry and C+ (Plus) in Eng./Kis.  | 5 years (Integrated programme)                                   |
| Bachelor of Engineering Technology (Electrical and Electronic Engineering Technology)  | • Diploma in Technology (Electrical and Electronic Engineering Technology) together with KCSE Mean Grade C- (Minus)   | 3 years (Part-time)  |
| Diploma in Technology (Electrical and Electronic Engineering)  | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Electrical and Electronic Engineering Technology or its equivalent recognised by senate of TU-K or TEP Diploma in the above disciplines.  | 3 years (Part-time)  |
| Diploma in Technology (Electrical and Electronic Engineering)  | • KCSE mean Grade of C (Plain) with at least C (Plain) in Maths A, Physics, Chemistry and Eng./Kisw   | 3 years (Integrated programme)                                   |
| <b>SCHOOL OF MECHANICAL AND MANUFACTURING ENGINEERING</b>  |   |  |
| Bachelor of Engineering (Mechanical Engineering)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics, C+ (Plus) in Chemistry and C+ (Plus) in Eng./Kis.  | 5 years (Integrated programme)                                   |
| Bachelor of Engineering Technology (Mechanical Engineering Technology)   | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Mechanical Engineering Technology OR<br>• TEP Diploma in Mechanical Engineering or equivalent with at least 2 years relevant work experience, together with Mean Grade C- (Minus) | 4 years (full-time)<br>3 years (Part-time)                       |
| Diploma in Technology (Mechanical Engineering Technology):<br>• Manufacturing Engineering<br>• Industrial Plant and Energy Engineering<br>• Structural Fabrication and Metallurgical Engineering<br>• Refrigeration and Air Conditioning Engineering;<br>• Mechatronic Engineering | • KCSE Mean Grade C (Plain) with at least C- (minus) in Maths, Physics, Chemistry and English/Kiswahili   | 3 years (Integrated)   |
| <b>SCHOOL OF SURVEYING AND SPATIAL SCIENCES</b>  |   |  |
| Bachelor of Engineering (Geospatial Engineering)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics, and C (plain) in Geography   | 5 years (Integrated)   |
| Bachelor of Applied Science (Geospatial Information and Communication)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics and C (plain) in Geography  | 5 years (Integrated)   |
| Bachelor of Technology (Surveying Technology)<br>• Surveying Technology<br>• Geo-information Technology  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics and C (plain) in Geography<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Geo-information Technology, Surveying Technology or equivalent          | 4 years (Integrated)<br>3 years (Part-time)                      |
| Bachelor of Science (Land Administration)  | • KCSE Mean Grade C+ (plus), with C+ in Mathematics and pass in Physics   | 5 years (Integrated)   |
| Diploma in Technology in: -<br>• Geo-information Technology<br>• Surveying Technology  | • KCSE Mean Grade C (Plain) with C- (minus) in Maths, C Physics and Geography OR Certificate in Land Surveying or Cartography   | 3 years (Integrated)   |
| <b>FACULTY OF APPLIED SCIENCES AND TECHNOLOGY</b>  |   |  |
| <b>SCHOOL OF BIOLOGICAL AND LIFE SCIENCES</b>  |   |  |
| Bachelor of Technology (Applied Biology)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, C (Plain) in Maths A and C (Plain) in Chemistry  | 4 years (Integrated programme)                                   |
| Bachelor of Technology (Biotechnology)   | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Applied Biology or equivalent   | 3 years (Part-time)  |
| Bachelor of Technology (Food Science and Technology)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology, C (Plain) in Maths A and C (Plain) in Chemistry  | 4 years (Integrated programme)                                   |
| Bachelor of Science (Biochemistry)   | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Biotechnology or equivalent   | 3 years (Part-time)  |
| Bachelor of Technology (Science Laboratory Technology)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Biology and C+ (Plus) in Maths A/ Physics<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Science Laboratory Technology or equivalent  | 4 years (Integrated programme)<br>3 years (Integrated programme) |
| Diploma in Technology (Industrial and Applied Biology)   | • KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.  | 3 years (Part-time)  |
| Diploma in Technology (Biotechnology)  | • KCSE Mean Grade C- (Minus) with C- (Minus) in Biology, Chemistry, Maths A/Physics and ENG/KIS   | 3 years (Part-time)  |

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Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE  | REQUIREMENTS   | DURATION   |
|---|--|--|
| Diploma in Technology (Biochemistry)  | • KCSE Mean Grade C- (Minus) with C- (Minus) in Biology, D+ (Plus) in Maths A and Chemistry  | 3 years (Part-time)  |
| Diploma in Technology (Ecology and Conservation Biology)                                      | • KCSE Mean Grade C- (minus) with C- (minus) in Biology, D+ (plus) in Maths A and Chemistry.   | 3 years (Part-time)  |
| Diploma in Technology (Food Science and Technology)   | • KCSE Mean Grade C- (minus) with C- (minus) in Biology, Chemistry, Physics/ Maths A and English/ Kiswahili  | 3 years (Integrated)   |
| <b>SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY</b>   |  |  |
| Bachelor of Technology (Information Technology)   | • KCSE Mean Grade C+ (plus) with C (Plain) in Maths A, C (Plain) in Eng/Kisw<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Information Technology or equivalent   | 4 years (Integrated)<br>3 years                                    |
| Bachelor of Technology (Computer Technology)  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics and C (Plain) in Eng/Kisw<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Computer Technology or equivalent   | 4 years (Integrated)<br>3 years                                    |
| Bachelor of Technology (Communication and Computer Networks)                                  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A, C+ (Plus) in Physics and C (Plain) in Eng/Kisw<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Computer Networks or equivalent   | 4 years (Integrated)<br>3 years                                    |
| Diploma in Technology (Information Technology)  | • KCSE Mean Grade C- (Minus) with C- (Minus) in Maths A and English/Kiswahili  | 3 years (Integrated)   |
| Diploma in Technology in: -<br>• Computer Technology<br>• Communication and Computer Networks | • KCSE Mean Grade C- (minus) with C- (Minus) in Maths A and Physics  | 3 years (Integrated)   |
| <b>SCHOOL OF CHEMISTRY AND MATERIAL SCIENCE</b>   |  |  |
| Bachelor of Technology (Industrial and Applied Chemistry)                                     | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Chemistry, C (Plain) in Maths A, and C (Plain) in Physics<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Analytical/Industrial Chemistry or equivalent   | 4 years (Integrated)   |
| Bachelor of Technology (Medicinal Chemistry)  | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Chemistry, Maths/Physics, Biology and any Group III/IV/V OR<br>• KCSE Mean Grade C- (minus) and Diploma in Technology in Analytical/Industrial Chemistry or equivalent   | 4 years (Integrated)<br>3 years (Part-time)                        |
| Diploma in Technology Applied Chemistry (Analytical Chemistry)                                | • KCSE Mean Grade C- (minus) with C- (minus) in Chemistry, D+ (Plus) in Maths A/Physics.   | 3 years (Integrated)   |
| Diploma in Technology Applied Chemistry (Industrial Chemistry)                                | • KCSE Mean Grade C- (minus) with C- (minus) in Chemistry, D+ (Plus) in Maths A/Physics.   | 3 years (Part-time)  |
| <b>SCHOOL OF HEALTH AND BIOMEDICAL SCIENCES</b>   |  |  |
| Bachelor of Technology (Community Health and Wellness)  | • KCSE Mean Grade C+ (plus) with C (Plain) in Biology, C (Plain) in Chemistry, C (Plain) in Maths/Physics and C (Plain) in English/Kiswahili   | 4 years (Integrated)   |
| Bachelor of Technology (Nutrition and Dietetics)  | • Credit Pass in a relevant Diploma or Pass in a relevant Diploma with two years working experience<br>• KCSE Mean Grade C- (Minus) with D+ (Plus) in Biology, Chemistry, Maths/Physics, Geography/ Agriculture/Home Science and English/Kiswahili   | 3 years (Part-time)<br>8 semesters                                 |
| Bachelor of Science in Medical Laboratory Sciences  | • KCSE Mean Grade C+ (Plus) with C+ in English, Kiswahili, Biology, Chemistry, Physics or Mathematics  | 4 years (Integrated)   |
| Bachelor of Science (Nutrition and Dietetics)   | • KCSE Mean Grade C+ (plus) with C (Plain) in Biology, C (Plain) in Chemistry, C (Plain) in Maths/Physics/ Geo and C (Plain) in English/Kiswahili OR<br>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Nutrition and Dietetics or equivalent  | 4 years (Integrated)<br>3 years (Part-time)                        |
| Diploma in Community and Public Health  | • KCSE Mean Grade C- (Minus) with C- (minus) in Biology, Chemistry, Maths/Physics and English/Kiswahili  | 3 years (Integrated)   |
| Diploma in Technology (Health Records & Information Technology)                               | • KCSE Mean Grade C- (minus) with D+ (plus) in Maths A/B   | 3 years (Integrated)   |
| Diploma in Pharmaceutical Technology  | • KCSE Mean Grade C (plain) with C (Plain) in Biology, Chemistry, Maths/Physics, English/Kiswahili   | 3 year (Integrated full time)                                      |
| Diploma in Nutrition and Dietetics  | • KCSE Mean Grade C- (Minus) with D+ (Plus) in Biology, Chemistry, Maths/Physics, Geography/ Agriculture/Home Science and English/Kiswahili OR<br>• Certificate in a related course, with KCSE D+<br>• KCSE Mean Grade C- (Minus) with D+ (Plus) in Chem/Physical Sciences, Bio/Biological Sciences Eng/Kis OR<br>• D (Plain) in Phy/Maths/HSC/AGRIC/GSC | 3 years (Integrated)   |
| <b>SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCE</b>  |  |  |
| Bachelor of Technology (Applied Statistics)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths Alternative A<br>• Diploma in Technology in Applied Statistics and KCSE Mean Grade C- (Minus)<br>• Diploma in Technology in Actuarial Science and KCSE Mean Grade C- (Minus)   | 4 years (Integrated)<br>3 Year (Integrated)<br>3 Year (Integrated) |
| Bachelor of Science (Mathematics)   | • KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths Alternative A  | 4 years (Integrated)   |
| Diploma in Technology in: -<br>• Applied Statistics<br>• Actuarial Science                    | • KCSE Mean Grade of C- (Minus) with C- (Minus) in Maths Alternative A and C- In Group II, III, OR any other   | 3 years (Integrated)   |

Integrated programmes will be taught during the day on weekdays together with Government-sponsored students  
Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE  | REQUIREMENTS  | DURATION  |
|---|---|---|
| <b>SCHOOL OF PHYSICS AND EARTH SCIENCES</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) in Maths A</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Technical and Applied Physics or equivalent</li> </ul>   | 4 years (Integrated programme)<br>3 years (Part time) |
| Bachelor of Technology (Environmental Resource Management)  | <ul style="list-style-type: none"> <li>• KCSE mean Grade C+ (plus) with C+ (plus) in Biology/Agric. and C+ (plus) in Chemistry/ Geography</li> <li>• Diploma in Technology in relevant areas from recognized institution</li> </ul>   | 4 years<br>3 years (Part time)                        |
| Bachelor of Technology (Environmental Science)  | <ul style="list-style-type: none"> <li>• KCSE mean Grade C+ (plus) with C+ (plus) in Biology/Agric. and C+ (plus) in Chemistry/ Geography</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Environmental Resource Management or equivalent</li> </ul>   | 4 years (Integrated)<br>3 years (Part-time)           |
| Diploma in Technology (Environmental Resource Management)   | • KCSE mean Grade C- (minus) with C- (minus) in Biology and Chemistry Or a 1-year Certificate with KCSE D+ in relevant areas from an institution recognised by the Senate of TU-K   | 3 years (Integrated)                                  |
| Diploma in Technology (Technical and Applied Physics)   | • KCSE Mean Grade C- (minus) with C- (minus) in Physics, Maths A and Pass in 2 <sup>nd</sup> Group II, Group III/IV/V   | 3 years (Integrated)                                  |
| <b>CENTRE FOR INTEGRATED WATER RESOURCE MANAGEMENT (CIWRM)</b>  |   |   |
| Bachelor of Technology in Integrated Water Resources Management.  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths, Chemistry, Physics/Geography, Biology/ any Group III/IV/V</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in IWRM of Technical University and with a distinction or credit or any such qualification from the Technical University of Kenya or any other institutions accepted and recognized by the Senate of the Technical University of Kenya</li> </ul> | 4 years (Integrated programme)<br>3 years (Part time) |
| Diploma in Integrated Water Resources Management.   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C- (minus) with C- (minus) in Physics/Chemistry, Maths, Biology/ Geography and any Group III/IV/V</li> <li>• Candidates with a Certificate in Water Engineering or Certificate Grade III in Technology of the Technical University of Kenya or an equivalent qualification at the craft level from the Technical Training Institutes (TTI's) or from any other recognized institution</li> </ul> | 3 years (Integrated)                                  |
| <b>FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY</b>  |   |   |
| <b>SCHOOL OF BUSINESS AND MANAGEMENT STUDIES</b>  |   |   |
| Bachelor of Science (Accountancy)   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (Plus) in Maths A and C+ (Plus) in Eng./Kis.</li> <li>OR</li> <li>Diploma in Accountancy and KCSE Grade C- (minus)</li> </ul>  | 4 years (Integrated)<br>3 years (Part-time)           |
| Bachelor of Commerce: <ul style="list-style-type: none"> <li>• Accounting • Business Administration • Finance • Human Resource Management • Insurance</li> <li>• Logistics and Supply Chain Management • Marketing</li> </ul>   | • KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B   | 4 years (Integrated)                                  |
| Bachelor of Business Studies: <ul style="list-style-type: none"> <li>• Business Administration • Human Resource Management • Logistics and Supply Chain Management • Sales and Marketing Management, International Business Management, Marketing, Business Management</li> </ul> | • KCSE Mean Grade C- (Minus) and Diploma in Technology in any Business area   | 3 years (Part-time)                                   |
| Bachelor of Economics   | • KCSE Mean Grade C+ (Plus) and C+ (Plus) in Maths A and C (Plain) In English/Kiswahili   | 4 years (Integrated)                                  |
| 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>• 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 its equivalent recognised by senate of TU_K together with KCSE Mean Grade C- (Minus)</li> </ul>   | 4 years (Integrated)<br>3 years (Part-time)           |
| Bachelor of Technology (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>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Secretarial Studies or equivalent</li> </ul>   | 4 years (Integrated programme)<br>3 years (Part-time) |
| Diploma in Business Information Technology  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR</li> <li>• 1 year Certificate in Information Technology together with KCSE D+ (Plus).</li> </ul>   | 3 years (Integrated programme)                        |
| Diploma in Entrepreneurship   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR</li> <li>• 1 year Certificate in a relevant area together with KCSE D+ (Plus).</li> </ul>  | 3 years (Part-time)                                   |
| Diploma in Business Studies: <ul style="list-style-type: none"> <li>• Business Administration • Human Resource Management • Sales and Marketing Management • Procurement and Supply Chain Management</li> </ul>   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR:</li> <li>• 1 year Certificate in a relevant area together with KCSE D+ (Plus)</li> </ul>  | 3 years (Integrated programme)                        |

Integrated programmes will be taught during the day on weekdays together with Government-sponsored students  
Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE  | REQUIREMENTS   | DURATION   |
|---|--|--|
| Diploma in Accountancy  | • KCSE Mean Grade C- (minus) with C- (minus) in Maths A and Eng./Kis.  | 3 years (Part-time)  |
| Diploma in Office Administration: <ul style="list-style-type: none"> <li>• Legal Secretarial • Medical Secretarial • Business Secretarial • Foreign Language Secretarial</li> </ul> | • KCSE Mean Grade C- (Minus) with D+ (plus) in Maths A/B OR:<br>• 1-year Certificate in a relevant area together with KCSE D+ (Plus)   | 3 years (Part-time)  |
| <b>SCHOOL OF CREATIVE ARTS AND MEDIA</b>  |  |  |
| Bachelor of Technology (Design)   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus), with C+ in Mathematics and C+ in Physics</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Design or equivalent</li> </ul>  | 4 years (Integrate)<br>3 years (Part-time)                       |
| Bachelor of Arts in Theatre Studies   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (Plus)</li> <li>• Be a holder of Kenya advanced certificate of education (or equivalent examination) certificate with a minimum of two principal passes and one subsidiary pass OR</li> <li>• Be a holder of a diploma or professional certificate in relevant discipline from an institution recognized by the senate of the university; OR</li> <li>• Be a holder of any other qualification accepted by the senate of the university</li> </ul> | 4 years  |
| Bachelor of Arts Music Studies  | <ul style="list-style-type: none"> <li>• Shall be an aggregate of C+ in the Kenya Certificate of Secondary Education (KCSE); At least C+ in Music</li> <li>• Holders of Diploma in Music of the Technical University of Kenya with at least a Credit (Upper Division) pass; Holders of the Diploma in Music Studies of the Technical University of Kenya</li> </ul>  | 4 years  |
| Bachelor of Technology (Journalism and Mass Communication)  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (plus) in Eng./Kis.</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Journalism and Mass Communication or its equivalent recognised by senate of TU_K</li> </ul>  | 4 years (Integrated programme)<br>3 years (Part-time)            |
| Bachelor of Music   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (plus) in Music</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Music or equivalent</li> </ul>   | 4 years (Integrated programme)<br>3 years (Integrated programme) |
| Bachelor of Technology (Printing Technology)  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B, Physics, English/Kiswahili, Any Group III/IV/V OR</li> <li>• Diploma in Technology in Printing Technology and KCSE Mean Grade C- (Minus)</li> </ul>  | 4 years (Integrated programme)<br>3 years (Part-time)            |
| Bachelor of Philosophy in Technology (Printing)   | • KCSE Mean Grade C- (Minus) and Higher Diploma in Printing Technology or its equivalent recognised by senate of TU-K  | 2 1/2 years (Part-time)  |
| Diploma in Technology in Design   | • KCSE mean grade C- (Minus) and D+(plus) in Mathematics and a Pass in Physics OR a relevant certificate in Fine Art or Design, together with Mean Grade D+ (Plus). Art and Design will be an added advantage. Where possible applicants are advised to provide portfolios for verification by the University.   | 3 years (Part-time)  |
| Diploma in Technology (Journalism and Mass Communication)   | • KCSE Mean Grade C- (minus) with C- (minus) in Eng./Kis. And a Pass in Maths A/B, or any Group II, Group III, 2 <sup>nd</sup> Group II or 2 <sup>nd</sup> Group III or Group IV/V   | 3 years (Integrated programme)                                   |
| Diploma in Music  | <ul style="list-style-type: none"> <li>• KCSE C- (minus) with C- (Minus) in Music and a Pass in Eng./Kis. Maths A/B or any Group II or Group III, 2<sup>nd</sup> Group II or 2<sup>nd</sup> Group III of Group IV or Group V. OR</li> <li>• 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.</li> </ul>   | 3 years (Integrated programme)                                   |
| Diploma in Technology (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+ (Plus)   | 3 years (Integrated programme)                                   |
| <b>SCHOOL OF HOSPITALITY AND HUMAN ECOLOGY</b>  |  |  |
| Bachelor of Science in Tourism and Travel Management  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B and a pass in English/Kiswahili OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology (Dip-Tech) in Tourism Management or equivalent</li> </ul>  | 4 Years (Integrated Program)                                     |
| Bachelor of Technology in Tourism and Travel Management   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B and a pass in English/Kiswahili OR</li> <li>• 3-year Diploma in Technology in Tourism and Travel Management from TUK or Equivalent qualification from another institution recognized by the Senate together with KCSE Mean Grade C- (Minus) OR</li> <li>• KCSE Mean Grade D+ (Plus), a Certificate and Diploma in Tourism and Travel Management or equivalent</li> </ul>  | 4 Years (Integrated Program)<br>3 years (Part time)              |
| Bachelor of Science in Hospitality Management   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B and a pass in English/Kiswahili OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology (Dip-Tech) in Hospitality Management or equivalent</li> </ul>  | 4 Years (Integrated Program)                                     |

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Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE  | REQUIREMENTS   | DURATION  |
|---|--|---|
| Bachelor of Technology in Hotel and Restaurant Management                     | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B and a pass in English/Kiswahili OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology (Dip-Tech) in Hotel and Restaurant Management or equivalent OR</li> <li>• KCSE Mean Grade D+ (Plus), Certificate and a Diploma in Hotel and Restaurant Management or equivalent</li> </ul>           | 4 Years (Integrated Program)<br>3 years (Part time)   |
| Bachelor of Technology in Institutional Catering and Accommodation Management | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B and a pass in English/Kiswahili</li> <li>• Group II or Group III, 2<sup>nd</sup> Group II or 2<sup>nd</sup> Group III or Group IV or Group V</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology (Dip-Tech) in Institutional Catering and Accommodation Management or equivalent</li> </ul> | 4 Years (Integrated Program)<br>3 years (Part time)   |
| Bachelor of Science in Event and Convention Management                        | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology (Dip-Tech) in Event and Convention Management or equivalent</li> </ul>   | 4 Years (Integrated)                                  |
| Bachelor of Technology in Textile Technology                                  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (plain) in Chemistry OR</li> <li>• Diploma in Technology in Textile Technology and KCSE Mean Grade C- (Minus) OR</li> <li>• KCSE Mean Grade D+(Plus), Certificate and a Diploma in Technology in Textile Technology</li> </ul>   | 4 Years (Part-time)<br>3 Years (Part-time)            |
| Bachelor of Arts in Social Work and Community Development                     | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (Plus) and a Pass in Eng./Kis, Maths A/B or Group II, Group III, 2<sup>nd</sup> Group II or 2<sup>nd</sup> Group III or Group IV/V OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Social Work and Community Development or its equivalent recognised by senate</li> </ul>   | 4 Years (Integrated)<br>3 Years (Part-time)           |
| Bachelor of Technology in Fashion Design                                      | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C (Plain) in Chemistry OR</li> <li>• 3-year Diploma in Fashion Design from TUK or Equivalent together with KCSE Mean Grade C- (Minus)</li> </ul>   | 4 Years (Part-time)<br>3 Years (Part-time)            |
| Bachelor of Science (Counselling Psychology)                                  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (Plus) OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Technology in Counselling Psychology or its equivalent recognised by senate</li> </ul>  | 4 Years (Integrated programme)<br>3 Years (Part-time) |
| Diploma in Counselling Psychology   | • KCSE Mean Grade C- (Minus) and a Pass in Eng./Kis, Maths A/B or Group II, Group III, 2 <sup>nd</sup> Group II or 2 <sup>nd</sup> Group III or Group IV/V,  | 3 Years (Integrated)                                  |
| Diploma in Social Work and Community Development                              | • KCSE Mean Grade C- (Minus) with D+ (Plus) in Chemistry and a Pass in Maths A/B or Physics, Biology or HSC, Eng/Kis or any Group III or Group IV or Group V OR a one-year relevant certificate with KCSE D+ (Plus)  | 3 Years (Integrated)                                  |
| Diploma in Technology (Fashion Design)  | • KCSE Mean Grade C- (Minus) with D+ (Plus) in Chemistry and a Pass in Maths A/B or Physics, Biology or HSC, Eng/Kis or any Group III or Group IV or Group V OR a one-year relevant certificate with KCSE D+ (Plus)  | 3 Years (Integrated)                                  |
| Diploma in Technology in Textile Technology                                   | • KCSE Mean Grade C- (Minus) with D+ (Plus) in Chemistry and a Pass in Maths A/B or Physics, Biology or HSC, Eng/Kis or any Group III or Group IV or Group V OR a one-year relevant certificate with KCSE D+ (Plus)  | 3 Years (Integrated)                                  |
| Diploma in Technology (Hairdressing and Beauty Therapy)                       | • KCSE Mean Grade C- (Minus) with D+ (Plus) in Chemistry and a Pass in Maths A/B or Physics, Biology or HSC, Eng/Kis or any Group III or Group IV or Group V OR a one-year relevant certificate with KCSE D+ (Plus)  | 3 Years (Integrated)                                  |
| Diploma in Technology in Tourism and Travel Management                        | • KCSE C- (minus) Mean grade and D+ (plus) in Maths A/Maths B and a pass in Eng./Kis, Group II or Group III, a 2 <sup>nd</sup> Group II/III any Group IV or Group V, OR relevant certificate from an institution recognised by senate with KCSE D+ (Plus).   | 3 Years (Integrated)                                  |
| Diploma in Technology in Event and Convention Management                      | • KCSE C- (minus) Mean Grade with a pass in English/Kiswahili, Mathematics A/B, Group III, Group II or 2 <sup>nd</sup> Group III or any Group IV V. OR<br>• Relevant certificate from an institution recognized by Senate together with KCSE D+ (Plus).  | 3 Years (Integrated)                                  |
| Diploma in Technology in Hotel and Restaurant Management                      | <ul style="list-style-type: none"> <li>• KCSE C- (minus) Mean grade and D+ (plus) in Maths A/ Maths B, and a pass in Eng./Kis, Group II or Group III, 2<sup>nd</sup> Group II or 2<sup>nd</sup> Group III or Group IV or Group V. OR</li> <li>• Relevant certificate from an institution recognized by Senate together with KCSE D+ (Plus).</li> </ul>   | 3 Years (Integrated)                                  |
| Diploma in Technology in Institutional Catering and Accommodation Management  | <ul style="list-style-type: none"> <li>• KCSE C- (minus) Mean grade and D+ (plus) in Maths A/ Maths B, and a pass in Eng./Kis, Group II or Group III, 2<sup>nd</sup> Group II or 2<sup>nd</sup> Group III or Group IV or Group V.</li> <li>OR</li> <li>• Relevant certificate from an institution recognized by Senate together with KCSE D+ (Plus).</li> </ul>  | 3 Years (Integrated)                                  |
| <b>SCHOOL OF INFORMATION AND SOCIAL STUDIES</b>                               |  |   |
| Bachelor of Science (Information Science)                                     | • KCSE Mean Grade C+ (plus) with C (plain) in Maths A/B  | 4 years (Integrated programme)                        |

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Part-time programmes will be taught in the evenings and on weekends

| COURSE TITLE  | REQUIREMENTS   | DURATION  |
|---|--|---|
| Bachelor of Arts in Communication Studies   | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (plus) in Eng./Kis., Group III, Group IV or Group V OR</li> <li>• KCSE Mean Grade C- (minus) and Diploma in Journalism and Public Relations, Communication Studies, Business Administration and Sales and Marketing or equivalent OR</li> <li>• Higher Diploma in Human Resources, Public Relations, Communication Studies or equivalent</li> </ul> | 4 years (Integrated programme)                        |
| Bachelor of Technology (Information Studies)  | • KCSE Mean Grade C- (Minus) and Diploma in Technology in Library Information Technology, Archives and Records Management, Information Science or equivalent   | 3 years (Part-time)                                   |
| Bachelor of Arts (International Relations and Diplomacy)  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (plus) with C+ (plus) in Eng./Kis.</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in International Relations and Diplomacy or equivalent</li> </ul>   | 4 years (Integrated programme)<br>3 years (Part-time) |
| Bachelor of Arts (Criminology and Security Management)  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C+ (Plus) with a Pass in Eng./Kis., Math A/B or Group II, Group III, 2<sup>nd</sup> Group II/III or Group IV/V, OR</li> <li>• KCSE Mean Grade C- (Minus) and Diploma in Criminology or equivalent</li> </ul>  | 4 years (Part-time)<br>3 years (Part-time)            |
| Diploma in Technology in: <ul style="list-style-type: none"> <li>• Archives and Records Management</li> <li>• Library and Information Technology</li> </ul> | • KCSE Mean Grade C- (minus) and a Pass in Eng./Kis., Group II/III and 2 <sup>nd</sup> Group II/III or Group IV or Group V OR<br>• Relevant certificate together with KCSE D+ (Plus).  | 3 years (Integrated programme)                        |
| Diploma in International Relations and Diplomacy  | KCSE Mean Grade C- (Minus) with C- (Minus) in English/Kiswahili a Pass in Math A/B or Group II, Group III, 2 <sup>nd</sup> Group II/III or Group IV/V  | 3 years (Integrated Programmes)                       |
| Diploma in Disaster Management  | • KCSE Mean Grade C- (Minus) with C- (Minus) in English/Kiswahili a Pass in Math A/B or Group II, Group III, 2 <sup>nd</sup> Group II/III or Group IV/V  | 3 years (Part-time)                                   |
| Diploma in Criminology and Security Studies   | • KCSE Mean Grade C- (minus) a Pass in Eng./Kis., Math A/B or Group II, Group III, 2 <sup>nd</sup> Group II/III or Group IV/V  | 3 years (Part-time)                                   |
| Diploma in Legal Studies  | <ul style="list-style-type: none"> <li>• KCSE Mean Grade C (plain) with C+(plus) in English/Kiswahili OR</li> <li>• 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 equivalent</li> </ul>  | 3 years (Part-time)                                   |

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## ONLINE APPLICATION PROCEDURE:

1. Create an Account with us by logging into intake.tukenya.ac.ke or sign in if the account is already created;
2. Enter your personal details to obtain a **REFERENCE NUMBER** which is in the form of **APP/xxxxx/2023**;
3. Enter your academic qualifications and upload scanned copies of the corresponding certificates or result slips. Please note that result slips for examinations taken more than two years ago will not be accepted;
4. Pay the application fee of KES 2,000 for Diploma/undergraduate programmes, KES 3,000 for postgraduate programmes and KES 3,600 for foreign applicants. These payments should be made through **MPESA Paybill number 5236153** and account number should be your application **REFERENCE NUMBER** obtained in 2. above. The payment will be confirmed automatically after 24 banking hours;
5. After the elapse of 24 banking hours, return to this portal, log in and choose your preferred programme of study; thereafter,
6. **SUBMIT** your programme of choice and wait for the selection process to be concluded. Meanwhile, you are advised to frequently log in, using your account details, to establish the status of your application.

Please note that applications should be submitted **NOT later than 3<sup>rd</sup> June, 2023**. However, you are advised to frequently visit our website for extended deadlines, if any. Also note that the **2023/2024 Academic Year** commences on **4<sup>th</sup> July, 2023**.

Enquiries or clarification on the application for the programmes above may be made through the dedicated Admissions Office telephone number +254 20 2216136.

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



**THE TECHNICAL UNIVERSITY OF KENYA**  
SCHOOL OF GRADUATE AND ADVANCED STUDIES

**POSTGRADUATE DEGREE PROGRAMMES**  
STARTING JULY 2023

THE 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 finding solutions to societal problems. The University invites applications from suitable and qualified persons to enrol for the following postgraduate programmes:

| PROGRAMME  | ELIGIBILITY  | DURATION | PROGRAMME   | ELIGIBILITY   | DURATION    |
|--|--|----------|---|---|-------------|
| <b>School of Mathematics and Actuarial Science</b>             |  |          | <b>School of Health and Biomedical Sciences</b>   |   |             |
| Master of Science in Applied Statistics                        | • A holder of at least a Second Class Honours (Upper Division), Bachelor's degree in Statistics of TU-K; or equivalent from another university recognized by the Senate OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree in Statistics of TU-K, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience or a postgraduate diploma/certificate in Statistics and one (1) year of relevant work experience.          | 2 years  | Doctor of Philosophy in Biomedical Science: Options in<br>• Medical Microbiology<br>• Medical Immunology<br>• Medical Parasitology<br>• Clinical Haematology & Blood Transfusion Science<br>• Clinical Chemistry<br>• Clinical Histocytopathology<br>• Medical Virology   | • A holder of Bachelor's degree in relevant field<br>• A holder of a Master's degree in the relevant field  | 6 semesters |
| Master of Science in Mathematics (Pure Or Applied Mathematics) | • A holder of at least a Second Class Honours (Upper Division), Bachelor's degree in Mathematics of TU-K; or its equivalent from a university recognised by the Senate of TU-K, OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree in Mathematics of TU-K, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience or a postgraduate diploma/certificate in Statistics and one (1) year of relevant work experience. | 2 years  | Doctor of Philosophy in Nutritional Sciences  | • A holder of Bachelor's degree in Human Nutrition and Dietetics, Public Health or relevant field<br>• A holder of a Master's degree in the relevant field<br>• A holder of Bachelor's degree in relevant field<br>• A holder of a Master's degree in the relevant field  | 6 semesters |
| <b>School of Biological and Life Sciences</b>                  |  |          | <b>School of Philosophy and Earth Sciences</b>  |   |             |
| Doctor of Philosophy in Entomology                             | A holder of a Master's degree in any relevant field  | 3 years  | Doctor of Philosophy in Public Health: Options<br>• Epidemiology and Disease control<br>• Epidemiology Informatics<br>• Epidemiology and Biostatistics<br>• Epidemiology Informatics<br>• Health Systems Management<br>• Health Records Management  | • A holder of a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognised by the Senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience   | 2 years     |
| Doctor of Philosophy in Plant Taxonomy                         | A Masters degree of TUK in a relevant field of Biology or equivalent from a university recognised by senate of TUK.  |          | Master of Science in Community Nutrition  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognised by the Senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience  | 2 years     |
| Doctor of Philosophy in Biochemistry                           |  |          | Master of Science in Medical Laboratory Science<br>Options in<br>• Medical Microbiology<br>• Medical Immunology<br>• Medical Parasitology<br>• Clinical Haematology & Blood Transfusion Science<br>• Clinical Chemistry<br>• Clinical Histocytopathology  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognised by the Senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience  | 2 years     |
| Doctor of Philosophy in Biotechnology                          |  |          | Master of Public Health   | • A holder of a Master's degree in any relevant field of Physics<br>A holder of a Master's degree in Physics  | 3 Years     |
| Doctor of Philosophy in Bioinformatics                         |  |          | Master of Science (Physics)   | • At least a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognized by the senate of TU-K OR   | 2 years     |
| Doctor of Philosophy in Food Science and Technology            |  |          | Master of Science (Medical Physics)   | • At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognized by the senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience.  | 2 years     |
| Doctor of Philosophy in Wildlife Conservation Management       |  |          | Master of Technology in Environmental Resource Management   |   |             |
| Doctor of Philosophy in Biodiversity Conservation              |  |          | <b>School of Chemistry and Material Science</b>   |   |             |
| Doctor of Philosophy in Aquaculture                            |  |          | Doctor of Philosophy (Chemistry)  | • A holder of a Master's degree in any relevant field of Chemistry  | 3 Years     |
| Doctor of Philosophy in Parasitology                           |  |          | <b>School of Physics and Earth Sciences</b>   |   |             |
| Doctor of Philosophy in Immunology                             |  |          | Doctor of Philosophy (Physics)  | A holder of a Master's degree in any relevant field of Physics  | 3 Years     |
| Master of Technology in Applied Entomology                     | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognised by the Senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience   | 2 years  | Master of Science (Physics)   | • At least a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognized by the senate of TU-K OR   | 2 years     |
| Master of Technology in Applied Parasitology                   | • At least a Second Class Honours (Upper Division) degree in Biological or related field of TU-K or its equivalent from a university recognised by the Senate of TU-K OR   | 2 years  | Master of Science (Medical Physics)   | • At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognized by the senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience.  | 2 years     |
| Master of Science in Forensic Biochemistry                     | • Second Class Honours (Lower Division) degree in Biological or related field or its equivalent from a university recognised by the Senate of TU-K with either two (2) years relevant work experience OR a postgraduate diploma in relevant field of biology.  |          | <b>School of Business and Management Studies</b>  |   |             |
| Master of Science in Applied Parasitology                      |  |          | Doctor of Philosophy in Business Administration:<br>• Accounting • Finance<br>• Human Resource Management • Logistics and Supply Chain Management • Marketing Management • Strategic Management • Business Analytics • Information Systems and Technology Management • Operations Strategy and Management • International Trade and Business Management • Risk and Actuarial Science • Innovation and Entrepreneurship Management | • A holder of a relevant Master's degree of TU-K or of another university or institution recognized by Senate of TU-K; OR<br>• A candidate enrolled for a Master's Degree in TU-K for at least one year who has, to the satisfaction of the Senate, shown exceptional progress in the research work to merit upgrading.   | 2 years     |
| Master of Science in Biochemistry                              |  |          | <b>School of Mechanical and Manufacturing Engineering</b>   |   |             |
| Master of Science in Biotechnology                             |  |          | Doctor of Philosophy in Mechanical Engineering  | • Master of Science in Mechanical Engineering or Master of Engineering in Mechanical Engineering or any such qualification from TU-K or any other institution accepted and recognized by Senate   | 3-6 years   |
| Master of Technology in Biotechnology                          |  |          | Master of Technology (Mechanical Engineering Technology)  | • At least a Second Class Honours (Upper Division) degree or its equivalent from a university recognised by the Senate of TU-K OR<br>• Second Class Honours (Lower Division) degree or its equivalent in the relevant discipline with a Postgraduate diploma/certificate and 1 year of relevant work experience in the following areas:-<br>i. Bachelor of Technology in Mechanical Engineering Technology<br>ii. Bachelor of Philosophy in Mechanical Engineering Technology<br>iii. BSc/B.Eng in Mechanical Engineering or its equivalent | 2 years     |
| Master of Science in Immunology                                |  |          | <b>School of Electrical and Electronic Engineering</b>  |   |             |
| Master of Science in Microbiology                              |  |          | Doctor of Philosophy in Electrical and Electronic Engineering (By Research)   | • A holder of a Master's degree in Electrical & Electronics from Technical University of Kenya, or<br>• A holder of a relevant Master's degree from another institution recognized by the Senate of TU-K<br>• A Bachelor's degree in a relevant field   | 3 years     |
|  |  |          | Master of Science in Electrical and Electronic Engineering  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.   | 2 years     |

| PROGRAMME   | ELIGIBILITY   | DURATION                                       | PROGRAMME   | ELIGIBILITY  | DURATION             |
|---|---|--|---|--|----------------------|
| Masters of Technology in Petroleum Chemistry  | • At least a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognized by the senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognized by the senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1-year relevant work experience.   | 2YRS   | Master of Arts in Entrepreneurship  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| Master of Science in Computational Chemistry  | • At least a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognized by the senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognized by the senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience.   | 2YRS   | Master of Business Administration:<br>• Accounting • Finance<br>• Human Resource Management • Logistics and Supply Chain Management • Marketing Management • Strategic Management • Business Analytics • Information Systems and Technology Management • Operations Strategy and Management • International Trade and Business Management • Risk and Actuarial Science • Innovation and Entrepreneurship Management | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognized by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| <b>School of Computing and Information Technologies</b>   |   |  | <b>School of Information and Social Studies</b>   |  |                      |
| Doctor of Philosophy in Computer Science  | • A holder of a Master's degree In Computer science from Technical university of Kenya, or<br>• A holder of a relevant Master's degree from another institution recognised by the Senate of TU-K<br>• A Bachelor's degree in a relevant field   | 3 years  | Doctor of Philosophy In Applied Linguistics   | • A holder of a Master's Degree of Technical University of Kenya in the relevant field; OR<br>• A holder of a relevant Master's Degree from another institution recognised by the Senate of TU-K, shown exceptional progress in the research work to merit upgrading.<br>• A holder of Degree in the relevant field  | 3 years              |
| Doctor of Philosophy in Information Systems   | • A holder of a relevant Master's degree from another institution recognised by the Senate of TU-K<br>• A Bachelor's degree in a relevant field   |  | Doctor of Philosophy in Information and Knowledge Management  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| Master of Technology in Computer Technology   | • At least a Second Class Honours (Upper Division) degree of TU-K in Computer Technology or equivalent from a university recognised by the Senate of TU-K OR  | 2 years  | Master of Applied Linguistics   | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| Master of Technology in Communication and Computer Networks   | • At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognised by the Senate of TU-K; with either at least two (2) years of relevant experience OR relevant Postgraduate Diploma with 1 year relevant work experience.  |  | Master of Science in Information and Knowledge Management   | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| <b>Centre for Integrated Water Resource Management (CIWRM)</b>  |   |  | Master of Science in International Relations  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| Master of Technology in Integrated Water Resources Management   | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.<br><b>RELATED FIELDS OF STUDY:</b><br>Integrated Water Resources Management (IWRM); Hydrology & Water Resources; Geography Chemistry; Biology; Biochemistry; Environmental Sciences; Political Sciences; Law, Governance and Public Policy; Economics; Earth Sciences; Meteorology/Climate Sciences, Civil Engineering; Water & Environmental Engineering; Biosystems and Environmental Engineering; Geospatial Engineering; Agricultural Engineering; Mechanical Engineering; Electrical Engineering; etc. | Minimum 2 Years (Full Time)<br>Maximum 4 Years | <b>Centre for Science and Technology (CSTS)</b>   |  |                      |
| <b>School of Construction and Property Studies</b>  |   |  | Postgraduate Certificate in Research Methods  | • A holder of at least a first degree of the Technical University of Kenya (TU-K) or equivalent from another recognized university or institution, or any other qualifications recognized by Senate.   | 3 months             |
| Doctor of Philosophy in Construction Project Management   | • A holder of a Master's degree in Construction Project Management or related area, from TU-K or any other institution accepted and recognized by Senate, or<br>• A holder of a relevant Master's degree of Technical University of Kenya or of any other institution recognised by Senate<br>• A holder of a relevant Bachelor's degree of TU-K or from any other university recognised by the Senate of TU-K  | 3 years  | <b>School of Creative Arts and Media</b>  |  |                      |
| Master of Construction Project Management Research and Thesis   | • At least a second class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the senate of TU-K OR<br>• At least a Second Class Honours (Lower Division) degree of TU-K or equivalent from a university recognized by the senate of TU-K; with either at least two (2) years of relevant industry experience OR relevant Postgraduate Diploma with 1-year relevant work experience.  | 2 Years  | Master of Music in Music Education Or African Music Studies   | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| <b>School of Mechanical and Manufacturing Engineering</b>   |   |  | Master of Musical Arts in Composition Or Performance  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.                | 2 years              |
| Doctor of Philosophy in Mechanical Engineering  | • Master of Science in Mechanical Engineering or Master of Engineering in Mechanical Engineering or any such qualification from TU-K or any other institution accepted and recognized by Senate   | 3-6 years                                      | <b>School of Hospitality and Human Ecology</b>  |  |                      |
| Master of Technology (Mechanical Engineering Technology)  | • At least a Second Class Honours (Upper Division) degree or its equivalent from a university recognised by the Senate of TU-K OR<br>• Second Class Honours (Lower Division) degree or its equivalent in the relevant discipline with a Postgraduate diploma/certificate and 1 year of relevant work experience in the following areas:-<br>i. Bachelor of Technology in Mechanical Engineering Technology<br>ii. Bachelor of Philosophy in Mechanical Engineering Technology<br>iii. BSc/B.Eng in Mechanical Engineering or its equivalent   | 2 years  | Doctor of Philosophy in Hospitality Management  | • A holder of a Master's (Thesis Option) degree of TUK in Hospitality Management or related field OR<br>• A holder of a Master's (Thesis Option) degree Hospitality Management or related field from another institution recognized by Senate.<br>OR<br>• A holder of a Master's (Non-Thesis Option) degree in Hospitality Management or related field from TUK or another institution recognized by Senate<br>• A candidate may be required to take a pre-qualification exam in special circumstances | A Minimum of 3 Years |
| <b>School of Electrical and Electronic Engineering</b>  |   |  | Doctor of Philosophy in Tourism Management  | • A holder of a Master's (Thesis Option) degree of TUK in Tourism Management or related field OR<br>• A holder of a Master's (Non-Thesis Option) degree in Tourism Management or related field from TUK or another institution recognized by Senate<br>• A holder of a Master's (Non-Thesis Option) degree in Tourism Management or related field from TUK or another institution recognized by Senate   | A Minimum of 3 Years |
| Doctor of Philosophy in Electrical and Electronic Engineering (By Research)   | • A holder of a Master's degree in Electrical & Electronics from Technical University of Kenya, or<br>• A holder of a relevant Master's degree from another institution recognized by the Senate of TU-K<br>• A Bachelor's degree in a relevant field   | 3 years  | Doctor of Philosophy in Fashion Design and Technology   | • A relevant Master's degree of TU-K or of another university or institution recognized by Senate<br>OR<br>• A candidate enrolled for a Master's Degree in TU-K for at least one year who has, to the satisfaction of the Senate, shown exceptional progress in the research work to merit upgrading   | 3 Years (Full-time)  |
| Master of Science in Electrical and Electronic Engineering  | • At least a Second Class Honours (Upper Division) degree of TU-K in the relevant field or equivalent from a university recognised by the Senate of TU-K OR<br>• A holder of a Second Class Honours (Lower Division) Bachelor's degree of TU-K in the relevant field, or equivalent from another university recognized by Senate with either at least two (2) years of relevant experience OR a relevant postgraduate diploma/certificate and one (1) year of relevant work experience.   | 2 years  | Doctor of Philosophy in Textile Technology  | • A relevant Master's degree of TU-K or of another university or institution recognized by Senate<br>OR<br>• A candidate enrolled for a Master's Degree in TU-K for at least one year who has, to the satisfaction of the Senate, shown exceptional progress in the research work to merit upgrading   | 3 Years (Full-time)  |
| <b>School of Business and Management Studies</b>  |   |  | Master of Science in Tourism and Travel Management  | • A minimum Second Class (Upper division) Honours bachelor's degree from an institution recognized by Senate OR<br>• Second Class (Lower Division) Honours bachelor's degree in the relevant disciplines with a Postgraduate certificate and 1 year of relevant work experience or at least 2 years of relevant work experience  | 2 years full time    |
| Doctor of Philosophy in Business Administration:<br>• Accounting • Finance<br>• Human Resource Management • Logistics and Supply Chain Management • Marketing Management • Strategic Management • Business Analytics • Information Systems and Technology Management • Operations Strategy and Management • International Trade and Business Management • Risk and Actuarial Science • Innovation and Entrepreneurship Management | • A holder of a relevant Master's degree of TU-K or of another university or institution recognized by Senate of TU-K; OR<br>• A candidate enrolled for a Master's Degree in TU-K for at least one year who has, to the satisfaction of the Senate, shown exceptional progress in the research work to merit upgrading.   | 2 years  | Master of Science in Hospitality Management   |  |                      |
|   |   |  | Master of Science in Events and Convention Management   |  |                      |



# THE TECHNICAL UNIVERSITY OF KENYA

*Education and Training for the Real World*

## CONTACTS

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