

# TU NEWS

A publication of the Office of the Vice-Chancellor

September - December 2016



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2. School of Electrical and Electronic Engineering
3. School of Infrastructure and Resource Engineering
4. School of Mechanical and Process Engineering
5. School of Surveying and Geospatial Sciences
6. Centre for Engineering Innovation and Production

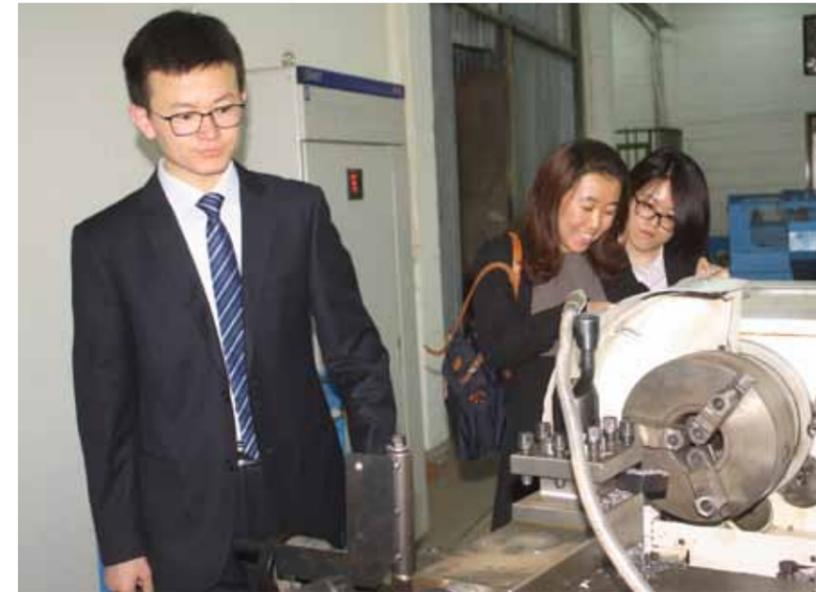
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2. School of Creative Arts and Technologies
3. School of Hospitality and Tourism Studies
4. School of Information and Communication Studies
5. School of Social and Development Studies
6. Centre for Creative and Cultural Industries

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## MESSAGE FROM THE VICE-CHANCELLOR

As we near the end of 2016, we have every reason to be happy and grateful to the Almighty God. This year has been momentous for the TU-K community in many ways. Our students have continued to excel in co-curricular activities. Somehow it has become a routine for them to win so many trophies in ball games, drama and athletics. From coming tops at the Samsung Academy, Joyce Nyaruai's chess exploits locally and in Baku, Azerbaijan where she represented Kenya to our own TU-K FC and Hockey team winning major trophies, we have confirmed to all and sundry that we mean business.

I thank the students and their leaders for ensuring that there was no single disturbance in 2016. The fact that there was no distraction meant that we maintained our focus and the academic calendar was not affected in any way. It is fact that in life there is no issue that is too big that it can't be discussed and an amicable solution found. Confrontation means dialogue has not been given a chance.

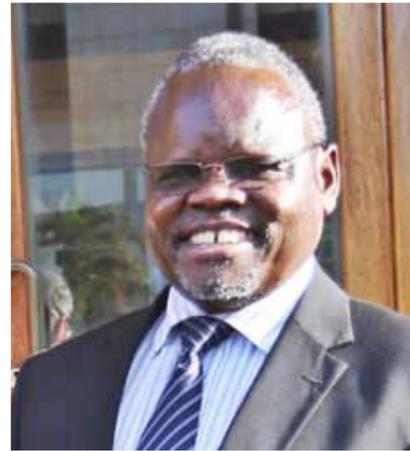
It is encouraging to note that several TU-K students have already secured jobs even before they graduate. This is a huge statement on the quality of our teaching and training. Continuing students should be confident and work smart as they look forward to joining the labour market or to create their own businesses and hire others, to work for them. TU-K motto: *Education and Training for the Real World*, is being actualised by our own students.

The Ministry of Education and Avic International Holding Corporation deserve our gratitude for making the 2016 Africa Tech Challenge season a success. The Challenge which was held at TU-K aimed at producing hands-on graduates as well as entrepreneurs. The competition was first held in 2014 as part of Avic's corporate social responsibility. The company's partnership with the Government is aimed at creating more than 5,000 jobs by 2019. I am certain that our students maintain a keen interest in the competition, they will form the majority of the 5000 that shall get the job opportunities.

For the students keen on excelling in academic pursuits, the University has introduced a scholarship scheme. The decision was made by the University Management Board to offer partial scholarships to the best performing students as a way of recognising and rewarding their hard work.

The University has continued to attract top-notch scholars and researchers. The coming on board of scholars of repute has increased our capacity in terms of teaching, supervision and research thus making TU-K a first choice for new students. The University staff, both teaching and non-teaching, also deserve recognition for their hard work that has enabled the university to come this far. Their hard work and patience in guiding students and ensuring university operations are up to standard cannot go un-noticed.

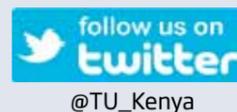
I wish all students, staff, parents and sponsors a Merry Christmas and prosperous 2017.



**Prof Dr-Ing. Francis W.O. Aduol**  
Vice-Chancellor

**"It is encouraging to note that several TU-K students have already secured jobs even before they graduate. This is a huge statement on the quality of our teaching and training. Continuing students should be confident and work smart as they look forward to joining the labour market." -Prof Francis Aduol**

**Editorial Team:**  
Dr Ken Ramani, Cosmas Kanyadudi,  
Daniel Macharia, Billy Mutai, Lucy Anaya,  
Bernard Awino, David Mwangi, Larissa Cheloti



## STUDENTS URGED TO THINK INNOVATION



**A student participates in the question-answer session**

Students have been challenged to think innovatively and act with integrity in order to compete globally.

Speaking during the second clubs and Association Exhibition Day, held at TU-K, the Director-General of Kenya Vision 2030 Delivery Secretariat Prof. Gituro Wainaina emphasised that universities should set the pace in innovation. He added that this can be achieved by introducing innovative programmes as well as ensuring proper management of time and resources.

Prof. Gituro noted that students should acquire proper skills in communication which is key to interaction, socialisation and also embrace other disciplines. "In today's world, employers look for essential

skills such as communication and presentations. Other valuable considerations include; energy, intelligence and integrity," he said.

The Director reminded students to embrace new technology because it goes hand in hand with innovation and entrepreneurship. He added, "All these must be anchored on integrity. It is a virtue you must practice on your own and without waiting to be taught."

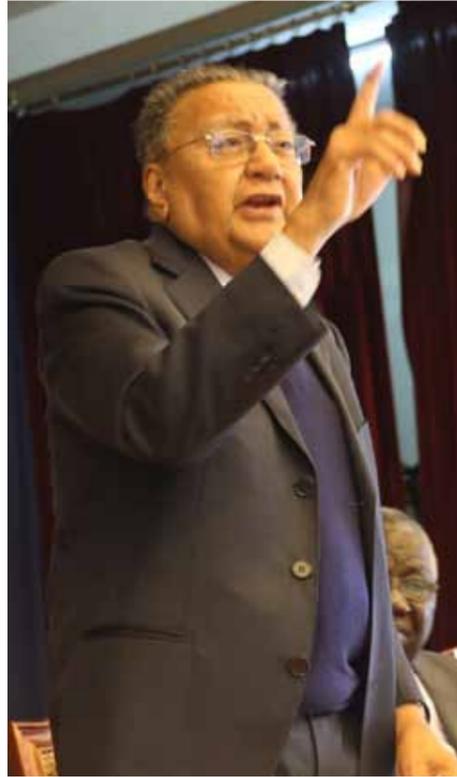
**"Students should acquire proper skills in communication which is key in interaction and socialisation."**

AKAD Educational Group Chief Executive Officer (CEO), Dr. Julius Weche addressed Creative and Innovative Entrepreneurship in the modern world. He asked students to identify their market and come up with a product strategy that can stand the test of time. He emphasised on the need for creativity while packaging their products.

Kenya Institute of Management (KIM) Head of Communication and Public Relations Ms Miriam Mukami asked students to exercise patience, develop the right attitude and exude passion in everything they do.

Present during the event included; TU-K Director Communications and Public Affairs Dr. Ken Ramani, Director Alumnus Affairs Mr. Maurice Okungu among others.

# CHANCELLOR MAKES A RARE ADDRESS TO FIRST-YEARS



Dr. Manu Chandaria addressing First Year students during 2016 orientation



The Chancellor, Dr. Manilal (Manu) Chandaria, has challenged students to study diligently and utilise all available resources. Dr. Chandaria noted that the students' individual efforts will determine their destiny.

Dr. Chandaria who addressed First Year students, asked them not to ignore other aspects of development the university presents. He cited discipline, commitment, humility and hard work as yard sticks of success in today's world.

He reiterated that the University has the onerous duty of training personnel that can be the engine of the industrial and technological sectors of the country's economy. "Technological

discipline will put most education institutions in good state, to play their role in contributing towards Vision 2030," he said.

In order to remain relevant in the competitive world, the Chancellor urged students to work hard and embrace education.

"Education is the anchor of your future. As responsible citizens of this country, be ready to embrace it. It does not matter whether you

**TU-K has the onerous duty of training personnel that can be the engine of industrial and technological sectors of the country's economy.**

complete your course or not, but you will be judged according to your deeds," said Chandaria.

The University Council Chairman, Prof. Godfrey Nguru congratulated students for gaining good grades that enabled them to be admitted to the University. He reminded them to count themselves privileged and therefore utilise the opportunities will.

Prof. Nguru warned students against radicalisation, peer group influence and joining tribal affiliations. He asked them to remain responsible and make the right decisions.

This year recorded the highest number of students' intake. Over 3,000 First Year students were admitted.

# VC TIPS ON ACADEMIC FREEDOM

The Vice-Chancellor, Prof Francis Aduol has reminded students to stick to their core business of learning. In his address to First Year students, the VC congratulated the students for attaining good grades that enabled them to join TU-K. He welcomed them to the university and asked them to study diligently. In addition use their time and available resources wisely. He urged them to embrace academic freedom but warned against misusing it. "This is an academic institution, a Professor has freedom to choose what to and how to teach you. You, too, should accept to be taught freely," emphasised the VC.

He reminded the students about the core mandate of the institution in training and imparting practical skills. He further explained that the university had made it mandatory for students to undergo 12 weeks of internal attachment commonly known as Internal Industry-Based Learning (IBL) under the supervision of the lecturers and 12 weeks of External Industry-Based Learning. TU-K, he added, had remained a distinctive player in academic and technical education.

On the requirements of the industry, he said, "Currently the industry is looking for graduates with skills. TU-K is well aware of this and has taken a strategic role of offering



The Technical University of Kenya Vice Chancellor Prof. Francis Aduol (L) congratulating the incoming SATUK Chairman Brian Reeves Obare (R), on the center is the outgoing chairman Brayan Ambuli shortly after the swearing-in ceremony

**"It is the tradition of TU-K for a student to attend lectures for at least 75% of the course, failure to which one is not allowed to sit an examination."**  
 – Prof. Francis Aduol

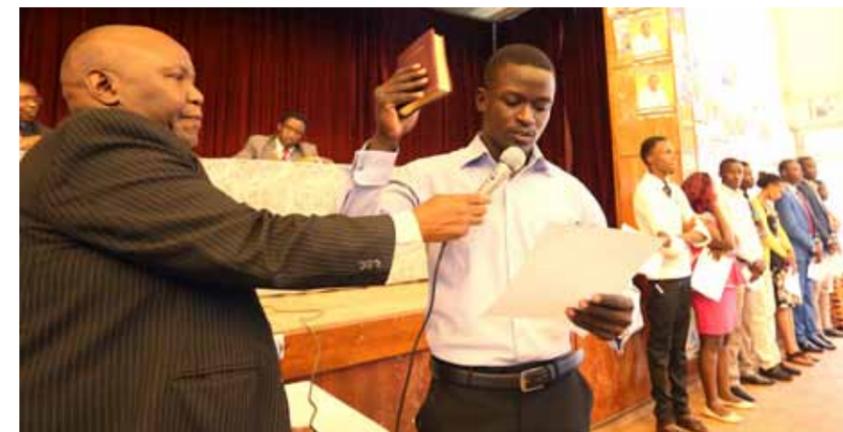
hands-on skills so that when you go out there, you are able to meet these expectations of the industry."

The VC emphasised on lecture attendance noting that it is the tradition of TU-K for a student to attend at least 75% of the lectures in every course failure to which he/she will not be allowed to sit for examination.

He further cautioned them against exam cheating. Prof. Aduol advised students to maintain a high standard of discipline saying it is the cornerstone of academic excellence. Prof. Aduol also urged students to take part in co curricular activities, terming it important for their health as well as their careers.

He further challenged them to take charge of their lives, choose the right friends and cautioned them against drug abuse, illicit sex, gambling and other social vices.

"Nairobi is a big, beautiful and complicated city. It has got so many challenges. I will plead with you to be watchful of people you associate with. Please do not easily fall prey to conmen," he added.



The incoming students council leaders during the swearing-in ceremony

## AFRICA TECHNOLOGY CHALLENGE HOLDS ITS FIRST CNC COMPETITION



Vice-Chancellor Prof. Francis Aduol addressing contestants of the Africa Tech Challenge Season three CNC Lathe Competition which was held at TU-K

The Technical University of Kenya (TU-K) received the second prize in the Africa Technology Challenge Season Three CNC Lathe Competition organised by the Ministry of Education and Avic International Holding Corporation.

The competition took place at the university and was closed by Vice-Chancellor Prof. Francis Aduol whose address touched on the importance of technology emphasising that it drives many economies to compete globally.

The VC urged participants to use the knowledge and skills acquired to change the entire continent.

56 Kenyan students took part in the CNC competition, alongside other groups from Uganda, Zambia, and Ghana respectively who. The top three winners were awarded with certificates.

The trainees will receive scholarships for Masters Degree to be pursued at Beihang University in China and will in addition land contracts to produce and export raw materials to Chinese companies.

"Stop saying that agriculture is the main source of livelihood while people are starving. Things will

change when we make good use of machines," said the VC.

While speaking about the role of Technical Training Institutes (TTI) in enhancing quality education in the country and beyond, the Professor explained that Technical Education plays a vital role in human resource development by creating skilled manpower, enhancing industrial productivity and improving the quality of life.

"Kenya, as most African

**"Stop saying agriculture is the main source of livelihood while people are starving. Things will change when we make good use of machines."**

**– Prof. Francis Aduol**

countries, has been left behind in the economic transformation by countries with which she was at par in the 1960. This is mainly due to the slow pace of industrialisation. The lag in industrialisation can be attributed largely to the lack of

skilled manpower," he noted.

Ugandan Education commissioner, Loy Muhwezi observed that the training should be spread throughout East Africa and that the developing countries need support. "I not only view the training as a competition, but also as a skill acquiring platform," she said.

The training was sponsored by Avic International aims at curbing unemployment and producing hands on graduates as well as entrepreneurs. The *Africa Tech Challenge* was first held in 2014 as part of Avic's corporate social responsibility.

Avic International Holding Corporation chief representative Su Tianshu disclosed that the company will partner with the Government to create 5,000 jobs by 2019.

In 2015, the ATC took place at Shamberere Technical Training Institute in Kakamega. Winners from the 2015 competition were awarded scholarships and trained to manufacture spare parts for earth movers. The first consignment was exported to China early this year.

Staff from the department of Journalism and Media Studies participated in the first ever International Communication Association conference held in Africa.

The event was held recently at Daystar University in Nairobi. It brought together more than 300 Communication scholars and experts from around the globe to share research, exchange ideas and stimulate dialogue in regard to democracy and growth opportunities in the African continent.

"This is a great opportunity for TU-K scholars in the Department of Journalism and Media Studies to share knowledge with scholars on a global platform that further builds one's portfolio," said Dr. Joyce Omwoha, the Chair, Journalism and Media Studies Department.

Dr. Omwoha participated at the conference as a mentor for postgraduate students from different universities.

"It is very critical for global communication scholars and professionals to share research work, exchange ideas and updates on the latest information and trends in the dynamic world of communication," she added.

The conference's theme was: *Growing Communication Scholarship: Looking to the past with gratitude, the present with passion, the future with hope* highlighted relevant issues, trends, and future agendas for communication scholarship. There were a series of plenary sessions by notable communication scholars, practitioners, and policy makers in the industry.

The key speaker was University

## JOURNALISM STAFF PARTICIPATE IN GLOBAL COMMUNICATION CONFERENCE



(From left) Dr. Julius Bosire, Dr. Rhyodah Nyambane, Mr. Allan Wefwafwa, Dr. Joyce Omwoha, Mr. David Katiambo

of Ghana Communication scholar Audrey Gadzekpo who discussed the link between academy and democracy.

Among the TU-K scholars who presented academic papers include; Dr. Julius Bosire who articulated media

**"It is critical for global communication scholars and professionals to share research work."**

law and ethics, Dr. David Katiambo whose presentation captured work grounded on Lacan's theory, Dr. Rhyodah Nyambane addressed Health Communication and the media and Mr. Allan Wefwafwa who presented a paper on Political Communication.

"It is a privilege to present an academic paper on a global platform, and especially a conference brought to African soil. More opportunities are bound to open," said Dr. Julius Bosire.

Other topics discussed included: global communication, media regulation, ownership and convergence, new media, religion and media, children, youth and women in the media and science communication.

The three-day event was sponsored by among others International Communication Association, University of Cape Town and the Media Council of Kenya. A call for scholarly papers has already been made for the upcoming conference that will be held in San Diego, USA in 2017.



TU-K staff at ICA Conference

# STUDENTS TO BENEFIT FROM SCHOLARSHIP

## TU-K launches scholarship to improve performance

The Technical University of Kenya has introduced a students' scholarship to reward the best performers from Kenya Certificate of Secondary Education (KCSE) examination who get admitted to the premier institution.

The Vice-Chancellor, Prof. Francis Aduol made the announcement in September, when he addressed a group of First-Year students who scored grade 'A' Plain at KCSE examination last year.

The VC disclosed that the decision was made by the University Management Board to offer a partial scholarship to the best performing students as a way and rewarding their excellence.

"This initiative is intended to encourage good performance in academic work at the University. It is a practice all over the world for universities to be proud of top performing scholars in their ranks," said the Vice-Chancellor.

The VC said the recipients will only be retained in the 'Vice-Chancellor's Roll of Honour' as long as they score an equivalent of First Class honours every academic year. To obtain a First Class, a student must score an average of 70 per cent in the course of study.

"We shall keenly monitor you as you progress through your academic journey. We have a lot of hope in you and trust that you will be mentors to others in order to excel," the VC told the students.

Prof. Aduol said other students not covered in the initial scholarship offer will be considered as long as they meet the strict criteria by posting excellent marks "equivalent of First Class" in their respective degree programmes.

Speaking on behalf of the scholarship recipients, one student promised the VC that they will do what it takes to remain in the scholarship programme that will reduce the financial burden on their parents.



The VC, DVCs and Executive Deans pose for a picture with the scholarship recipients

Distribution of scholarship recipients

Programme Name	No. of students
Architecture	28
Civil Engineering	27
Quantity Survey	21
Aeronautical Engineering	15
Mechanical Engineering	12
Electrical and Electronic Engineering	12
Chemical Engineering	6
Geospatial Engineering	5
Biochemistry	1
Real Estate	1
Accountancy	1
Business Information Technology	1
Information Science	1
<b>TOTAL</b>	<b>131</b>

**We shall keenly monitor you as you progress through your academic journey.**

Present during the launch were Deputy Vice-Chancellor in charge of Academics, Research and Students, Prof Paul Shiundu and DVC-Administration, Planning and Infrastructure, Prof Joseph Kiplang'at. Others were the Executive Deans Professors Alex Muumbo, Emily Akuno and Francis Gatheri as well as the Academic Registrar, Dr. Hesbon Nyagowa and the Director of Communications and Public Affairs Dr. Ken Ramani.



Vice-Chancellor Prof. Dr-Ing. Francis W.O. Aduol, Prof. Paul Shiundu, Prof. Joseph Kiplang'at, Prof. Emily Akuno and Prof. Alex Muumbo during the launch of the student scholarship

## CHINESE DIPLOMATS VISIT TU-K



Part of the Chinese delegation admire the Lathe machine used in the production of spare parts at TU-K

Diplomats from China's Ministry of Foreign Affairs recently toured TU-K. They were impressed by the state-of-the-art machines and equipment at the university. They expressed optimism that the equipment will provide the necessary skills for the establishment of small-scale industries through research, development and related activities.

The diplomats noted this recently, during their tour of the university to assess the Kenya - China Friendship Technology Training Centre (KCFTTC). They were accompanied by officials from Kenya's Ministry of Foreign Affairs.

The Centre was officially opened by the 3<sup>rd</sup> President of Kenya, Mwai Kibaki on 15<sup>th</sup> January 2013. It has

both Mechanical and Electrical workshops and laboratories. The Mechanical workshops consist of Computerised Numerical Control (CNC) milling and turning centres, Milling machines, Lathe machines, Planning machines, Cylindrical and Surface grinding machines.

The Electrical laboratories has the Programmable Logic Control units and Motor Rewinding workstations. In addition, the

**The Centre was officially opened by the 3<sup>rd</sup> President of Kenya, Mwai Kibaki on 15<sup>th</sup> January 2013. It has both Mechanical and Electrical workshops and laboratories.**

centre boasts of a Computer Aided Design/Computer Aided Manufacturing (CAD/CAM) laboratory and a modern Reverse Engineering laboratory which includes a commercial rapid prototyping workstation to aid in product design and development.

Present during the visit was TU-K Deputy Vice-Chancellor in charge of Technology, Partnerships and Innovations (TIP) Prof. Suki Mwendwa, Faculty of Engineering Science and Technology (FEST) Executive Dean Prof. Alex Muumbo among other members of faculty.

The Centre is being used to develop a new class of creative and technically-competent entrepreneurs and engineering. It will further develop and utilise technical manpower and expertise from engineering institutes and colleges.

## GEO-ICT TO BE USED IN FIGHTING CRIME



TU-K Vice-Chancellor Prof. Francis Aduol (Centre) exchange a document with NCRC Director Gerald Wandera after the signing ceremony. Present during the event were: Deputy Vice-Chancellor in charge of Technology Innovation and Partnerships (TIP) Prof Suki Mwendwa (Second left), the University Secretary Mrs. Ruth Kirwa (Left) and Dr. Simeon Kanani of the School of Surveying and Geospatial Sciences. Others are: NCRC Governing Council Member Prof. Florence Muli-Musiime (Second right) and Principal Researcher Stephen Muteti (Right).

The Technical University of Kenya has become the first local university to take a major step in combating crime using Geo-ICT technology. The university recently signed a Memorandum of Understanding (MoU) with the National Crime Research Centre (NCRC).

TU-K will come up with ways of mapping and visualising crime in form of databases and Geographic Information System (GIS) mapping.

The MoU was signed by the VC, Prof. Francis Aduol and Director Gerald Wandera. The ceremony was witnessed by Deputy Vice-Chancellor in charge of Technology Innovation and Partnerships (TIP) Prof Suki Mwendwa, the University Secretary Mrs. Ruth Kirwa and Dr. Simeon Kanani of the School of Surveying and Geospatial Sciences. Others were

NCRC Governing Council Member Prof. Florence Muli-Musiime, and Principal Researcher Stephen Muteti.

TU-K's departments of Geoinformation & Earth Observation and Spatial Planning & Design are actively involved in the project that will integrate human safety and security, with urban design.

The University will further benefit from the MoU by acquiring scholarships for five PhDs and 10 masters students in the area of crime mapping.

Prof. Aduol observed that the signing of an MoU marked an important journey in reducing crime using technology and therefore should not only be limited to degree programmes adding and staff exchange that security of any given society is paramount.

**TU-K will come up with ways of mapping and visualising crime in form of databases and Geographic Information System (GIS) mapping.**

# STUDENTS ELECT NEW LEADERS



The incoming TU-K students council leaders during the swearing-in ceremony at the University's Main Hall

The new student Council was sworn in on October 14<sup>th</sup> 2016.

Brian Reeves Obare was elected the Chairman of the Council. He will be deputised by Josephine Valarie Marani. The Secretary General position has been taken over by Jackson Kobia Anampiu and the Finance docket by Janet Wanjiru Mwangi.

Other officials who will serve in the Students' Council include; the Constitutional Affairs Secretary Nevil Odoyo Odhiambo, Academic Secretary Pharis Wambugu Jane, Gender Affairs Secretary Rose Adongo Okiya.

The School of Mathematics and Actuarial Sciences went against the norm. A female student, Dorcas Wamaitha Gatheru was elected and will be deputised by Evans Ouma Odhiambo.

Vice-Chancellor Prof. Francis

Aduol who was accompanied by his deputies Prof. Joseph Kiplang'at (in charge of Administration, Planning and Infrastructure and Prof. Paul Shiundu (in charge of Academics, Research and Students) congratulated the new officials and applauded students for carrying out peaceful elections.

The VC said, "You have demonstrated to other universities and the country at large that elections can be peaceful and that

**"You have demonstrated to other universities and the country at large that elections can be peaceful and that people do not need to fight during and after elections."**

**-Prof. Francis Aduol**

people do not need to fight during and after elections. The winners and losers have accepted the results with grace. Indeed we are proud of you."

He reminded officials to take up the responsibility with honour and that they have an enormous duty awaiting them.

While reminding both student leaders and the student fraternity to uphold laws spelt out in the Charter, Statutes as well as the Student Constitution.

The University Secretary Mrs Ruth Kirwa who conducted the swearing in ceremony, applauded the student voters for complying with the third gender rule that ensures the Council is gender-sensitive.

The incoming Chairman thanked the administration and student fraternity and promised to deliver their mandate.

## 2016 STUDENTS COUNCIL

CHAIRPERSON



Brian Reeves Obare

DEPUTY CHAIRPERSON



Josephine Valarie Marani

SECRETARY GENERAL



Jackson Kobia Anampiu

FINANCE SECRETARY



Janet Wanjiru Mwangi

ACADEMIC SECRETARY



Pharis Wambugu Jane

CONSTITUTIONAL AFFAIRS



Navil Odoyo Odhiambo

SOCIAL WELFARE



John Bosco Mawira

GENDER AFFAIRS



Rose Adongo Okiya

SPECIAL NEEDS SECRETARY



David Kerry Obura

SPORTS SECRETARY



Brian Oduor

FEMALE HOSTEL REP



Naomi Kemunto Kimasigi

MALE HOSTEL REP



Kennedy Kairu Gitau

SPEAKER



Paul Ngethe Karanja

DEPUTY SPEAKER



William Shitemi Wamoyo

CLERK



Gloria Akinyi Oketch

SERGEANT-AT-ARMS



Fredrik Chiluba Ongang'o



Peter Mbiria, the student innovator, working on Electric Convertible (E-con) wheelchair to be showcased in London.

## STUDENT INNOVATOR SHORTLISTED FOR AFRICA PRIZE

Peter Mbiria, a TU-K student has been shortlisted for the Africa Prize for Engineering Innovation.

Mr. Mbiria who is pursuing a diploma in Electrical and Electronics Engineering, is among 16 contestants selected from the African continent, to participate in the competition and subsequent award organised by the Royal Academy of Engineering in London.

Mbiria's innovation is an Electric Convertible (E-con) wheelchair (a specialised off-road wheelchair for the disabled). It is an attraction both locally and internationally. If he wins the award, he will become the first Kenyan student innovator to walk away with the coveted prize.

The wheelchair features multiple

smart functions that enable the user to be mobile, comfortable and independent. The idea of designing was conceptualised in 2011. The first prototype was developed in August 2014 for testing purposes.

The wheelchair has aspects of a tank belt system though inverted, a 4 by 4 vehicle systems and a manual wheelchair both modified to suit the terrain environment.

**Mbiria's innovation is on Electric Convertible (E-con) wheelchair (a specialised off-road wheelchair for the disabled).**



Peter Mbiria

## ECOLOGICAL RISK ASSESSMENT WORKSHOP HELD AT TU-K

Discussions in regard to pesticides as a necessary tool in reducing crop losses and increasing food production to feed the growing population, particularly in countries such as Kenya has elicited great interest.

This formed part of the discussions during a workshop dubbed, "A Global Framework for Implementing Consistent Ecological Risk Assessment for Pesticides for Sustainable Agriculture," held at TU-K.

The Workshop was opened by Prof Alex Muumbo, the Executive Dean, Faculty of Engineering Science and Technology, who represented the Vice-Chancellor, Prof Francis Aduol. Participants were drawn from the industry, academia and government. They gave a total of 12 presentations.

Just like the previous workshops, participants agreed that the information was useful and therefore assisted them to understand the complexities of ecological risk assessment.

It was reported that losses in maize in sub-Saharan Africa was upto 50% due to stem borers, 75% due to fungal attack by grey leaf spot and up to 90% caused by weed competition.

During the presentations, it emerged that up to 50% of the losses experienced during maize production resulted from skin borers, 75% due to fungal attacks by grey leaf spot and upto 90% caused by weed competition. The use of pesticides may have negative ecological impacts which need to be minimised. One of the key elements in the safe and sustainable use of a pesticide is to evaluate how the environment may be impacted as a result of exposure to the pesticide; this requires an ecological risk assessment.



Some of the participants during the workshop

Many countries include an ecological risk assessment in their registration requirements but as risk assessment is an evolving science, it is important, particularly in scientifically emerging regions, that the current best practices are understood and properly implemented.

Leading experts in risk assessment during the workshop included; Prof Joseph Lalah-Workshop Coordinator, TU-Kenya, Prof Shem Wandiga - Director, Institute of Climate Change, University of Nairobi. Dr. John B. Unsworth - Private Consultant, previously Bayer CropScience, UK.

It was noted that an ecological risk assessment can be broken down into several different steps; Planning, Problem formulation,

**One of IUPAC mandates is to provide training to young scientists from Government regulatory authorities, industry, research and academic sectors in developing nations.**

Analysis, Risk characterisation and Risk management. These five major phases, together with international approaches to ecological risk assessment, were discussed in detail.

The conference further discussed all aspects of ecological risk assessment, including good modeling practices, scenario development and local requirements. Participants were also able to network with the experts present.

One of IUPAC mandates is to provide training to young scientists from government regulatory authorities, industry, research and academic sectors in developing nations who will in future provide leadership in implementation of sustainable development programs in their countries.

IUPAC in collaboration with CropLife International, AGRO Division of the American Chemical Society and TU-K sponsored the workshop as part of fulfilling the IUPAC mandate.

# TU-K STUDENTS LAND JOBS EVEN BEFORE GRADUATING

*Journalism student joins Nation Media Group even before he graduates, thanks to his impeccable writing skills honed at TU-K.*

**A**donijah Ochieng, a Bachelor of Technology in Journalism and Mass Communication finalist has received recognition from market players in Online Media, Corporate and Market.

Adonijah who is graduating in December 2016 has already built an online content development and digital marketing company, a portfolio that has since earned him contracts with various companies such as Nation Media Group where he is charged with responsibilities including boosting online performance, ensuring visibility and market positioning.

## Broad-minded

He is a broad-minded journalist embracing the current shift of media content consumption from the traditional print and broadcast to the multimedia online convergence that demands multifaceted professionals. The online media migration that has already taken root in Kenya demands constant content update including write-ups, pictures, short videos and info-graphics.

Throughout the four years of study at TU-K, he learnt the theoretical and practical skills that prepared him adequately for his current job in journalism.

"In July 2016, I got a lifetime opportunity as an intern at Nation Media Group's Business Daily as an online editor where I developed interest in online journalism to align myself with the changing trends of the industry," he said.

Prior to Nation, he worked for



**Adonijah Ochieng**

The Kenyan Weekly, where he published stories on a range of issues with specific interest on policy, education, health, and business. He became an asset for the news publisher whereby during his second month of internship he helped start the online and digital news desk which he headed until he left in May of 2016.

Adonijah has also held positions

**The online media migration that has already taken root in Kenya demands constant content update including write-ups, pictures, short videos and info-graphics.**

as an intern and on part-time basis in various organisations among them Astute Technologies, Buni Innovators and The Nairobi Upperhill Hotel.

In addition to being a practising journalist, Adonijah is a Co-founder of Techno Brass Ltd, a digital and positioning start-up firm that seeks to help budding entrepreneurs increase their visibility and reach. At Techno Brass, he helps in developing content for digital and social media marketing. He also runs and writes on health issues for Afyasmile Kenya, a health blog he founded together with a college mate.

## Risk-taker

A calculated risk-taker with a growing knowledge in digital technology and communication, Adonijah has carved a niche as a n all-rounded journalist who executes the converged newsroom dynamics.

He has equally helped his colleagues grow their media and communication career and scope.

"Steady rise of internet and telephone penetration in Kenya and the great global connectivity is swiftly reshaping market trends, media, consumerism, interaction, business, politics among other pertinent components around human beings and the environment; with such a golden opportunity. I have taken up the challenge to educate my colleagues on the various career paths. Young people can invest their energy and make an excellent career," he added.

*Journalism finalist wants undergraduates to develop specific skills and be aggressive to break into the labour market.*

**A** Technical University of Kenya Journalism and Mass Communication finalist is encouraging continuing students to nurture their career strengths and build skills around them in-line with market trends.

Sharon Anyango Odhiambo, who is a Communications and Outreach Officer at African Technology Policy Studies Network (ATPS) says market demands professionalism and hands-on personalities with self-drive; a key component TU-K emphasises during training.

Before her elevation to the position of Communications and Outreach Officer at ATPS, Sharon joined the organisation as an intern where she impressed her authorities.

African Technology Policy Studies Network, is a trans-disciplinary network of researchers, policymakers, private sector actors and the civil society that promote generation, dissemination, use and mastery of STI for African development, environmental sustainability and global inclusion.

Sharon joined TU-K to pursue Bachelor of Technology in Journalism and Mass Communication is set to graduate this December.

Surprisingly she was the only female student in her class, going against the notion that the communication and media profession was only for men.

"You can't imagine being around



**Sharon Odhiambo**

men throughout the four years of study. I quickly learnt to stay with them, and I take pride to have out-performed several male colleagues," she notes.

**I must admit that I have built muscle in my profession. I am proud to have been taken through classwork with lecturers who understood market trends, particularly in technology."**

**- Sharon Odhiambo**

"Experience at ATPS is already seasoning my career in communication and corporate world. I am mastering practical skills to creatively solve problems," added Sharon.

She praised TU-K staff for remaining tough during their coursework indicating that the work situation demands bold personalities who measure-up to the challenges.

They say if you think that your lecturer is tough wait till you meet your boss.

"I must admit that I have built muscle in my profession. I am proud to have been taken through classwork with lecturers who understood market trends, particularly in technology," she adds.

Before she joined ATP, Sharon got an opportunity to intern at Elective Africa. Which was a stepping-stone to the corporate world.

"We were expected to make weekly presentation of progress reports on ongoing projects, which instilled in me discipline."

Some of the assignments she was tasked with included monitoring market competition, designing solutions to emerging challenges, among other key market components.

"To crown it, young minds preparing for the job market must take an initiative to identify what they are best in, remain aggressive, identify possible market openings and remain steadfast to learn the trade," she concludes.

## DOUBLE SCOOP FOR MUSIC STUDENT IN NATIONAL FETE

A Technical University of Kenya student won two coveted awards during the annual National Music Festivals that were held at Kasarani in October.

Mary Nduta, a second year Bachelor of Music student emerged the best in Soprano Solo Set Piece and Alto Solo Set Piece in the Universities Category.

Her excellent performance was part of the aggregate awards that placed TU-K on top of other universities.

Other awards TU-K won were the Central Bank of Kenya Set Piece with the song *Miaka Hamsini, Lamentation of Jeremiah*, two Quartet in the same class, Duet, a Trio and double number second position in other categories.

Nduta traces her passion to her family background describing her love for music as binding commitment to a soothing career.

"I am so happy to have posted impressive results in the just ended music festivals, accolades go to my trainers, music and performing arts colleagues, my family members, my church and audience who have supported me all through," said Nduta.

Back in primary school oblivious of her future career, Nduta was a leader in worship amongst her peers during children's choirs both in church and school. And of course with encouragement from primary school teachers to lead in songs. In high school, Nduta sprouted to later win an award in National Music Festivals.

When she joined secondary school, her passion would be spotted, she identified music clubs and choirs to nature her talent.

"Within no time, Mr Joseph Kiiru, a Music teacher at Senior Chief Koinange Girls High School, quickly identified my talent and appointed me a Music Prefect in Form One," disclosed Nduta adding that the new position boosted her zeal in music.

Nduta said Mr. Kiiru who was



Mary Nduta

taught by the TU-K Faculty of Social Sciences and Technology Executive Dean (FSST) Prof. Emily Akuno in his Bachelors degree at Kenyatta University, commended her for mastering the music scale - *Doh Re Mi Fah Soh Lah Ti Doh* ahead of other students in form one.

"My father James Gichu who is a choir master at his local church and a career dentist had already taught me techniques in performing music scale and this of course gave me an upper hand in school," said Nduta.

With concerted effort and commitment, Nduta won coveted Soprano Award - Solo Set piece in the 2013 National Music Festival that was held in Nakuru.

**"My father James Gichu, a choir master at his local church and a career dentist, had already taught me techniques in performing music scale and this of course gave me an upper hand in school." - Nduta.**

This conferred her a strong footing, confidence and energy to strive for the best. At the St. Veronica Catholic Church, Syokimau where she attends service, she is a choir member and sings the Psalms, a procedure during Mass.

"In my Kenya Certificate of Secondary Education (KCSE), I scored an A- (minus) in Music and an aggregate of B+ (plus). Prior to the release of KCSE results, I picked medicine coursework as the first choice to take after my father and sibling's footsteps who are in the medical field and music was my last choice," Nduta noted.

When TU-K invited her to pursue a Bachelors Degree in Music, she changed her mind from pursuing a medical career.

"When I got the placement letter from TU-K, I again wanted to do an inter-varsity transfer to KU, but I realised TU-K is the best university in teaching music. This is for the sole reason that we are few in class, that means we get sufficient access to music instruments including violin, saxophone and piano," said Nduta.

She adds that one-on-one mentorship is key in performing arts.

TU-K is on the market frontline in training music. Other universities offering the course are Maseno, Moi and Kenyatta University.

Some of the students are already building their careers through performance in concerts including the Nairobi Chamber Chorus and other platforms in Nairobi and across the country.

Nduta is part of Bel Canto, a girls choir bringing together female students mentored by Dr. Abbey Chokera who is part time lecturer at TU-K and Kenyatta University.

"Music industry is rapidly growing opening up several career opportunities, this calls for professionalism in training, production and performance," concludes Nduta.

## TU-K TOPS IN THE 2016 KENYA MUSIC FESTIVALS



TU-K student's choir performing at a past function

The Technical University of Kenya emerged the best overall winner in the University category in this year's Kenya Music Festivals scooping first position in thirteen categories, second position in ten categories and third position in six categories.

The 10-day season of song, dance, music and elocution at the Kasarani Sport Complex in August hosted by Ministry of Education was sponsored by the Central Bank of Kenya (CBK) as a way of celebrating the 50<sup>th</sup> anniversary.

The artistic highlight of the event was the extraordinary performance of TU-K choir's accompanied mixed set piece where the impeccable tonal quality and expressive rendition of Z. Randall Stroope's *Lamentations of Jeremiah* gave them a 90 per cent score, in first place.

Another festival highlight was the victory of the TU-K choir in

the University Category. They did a rendition of the CBK anthem which earned them a 94 per cent mark. The highest in their category, a trophy and cash prize of Sh200,000.

There were nine vocal and instrumental solo classes in Western and African music performances, earning a number of merit certificates on top of the first and second positions. The ensemble classes saw a trio and two quartets in a class of their own, and well-arranged instrumental ensembles.

This year, 10 visiting Makerere University students were part of the TU-K dance troupe. Their performance of three different dances earned them second position with excellent marks.

The University lauded the Department of Music and Performing Arts for excellent results.

**The festival highlight was the award of the university category's Central Bank of Kenya Trophy for their rendition of the CBK Anthem, awarded 94 per cent, the highest mark in the University Category.**



## WORLD SPACE WEEK MARKED

*TU-K joins other institutions in marking this year's event held at the University of Nairobi*

The Technical University of Kenya was among the main participants in the World Space week, an international celebration of Science and technology held at the University of Nairobi.

Among the main speakers were Emuhaya MP Dr. Wilber Ottichilo, Prof. Baki, Director School of Physical Sciences and Technology at The Technical University of Kenya and Dr. Moses Rugut, Director-General National Commission for Science, Technology and Innovation (NACOSTI).

This year's theme was "Remote Sensing: Enabling our Future" an inward looking theme, which touched on earth observation from Space for the betterment of the human race and highlighted a host of classic earth observation missions such as the U.S. Landsat mission, the work of inter-governmental groups such as GEOS Group on Earth Observations and emphasised on applications such as environment and agriculture monitoring, land use mapping and new uses such as location based services.

Prof. Baki gave the first keynote address. He demystified in detail space science and technology. "Science isn't given, you must be ready and stand out to do it," Prof. Baki said.

The World Space Week came about in 1999 when the United Nations General Assembly declared that World Space Week should be celebrated in October. It is in this line that the World Space Week Association (WSWA) came up with a global team of national coordinators

to promote the celebration of the event within their own countries.

The World Space Week intends to educate people around the world about the benefits of space, provide unique leverage in space outreach and education and foster international cooperation in space outreach and education.

The event aims to excite young people about science, technology, engineering, and math. The event witnessed representation from students and staff of the University



**Emuhaya MP Dr. Wilber Ottichilo speaking during the World Space Week seminar that was held at UoN**

**Astronomy researchers, students and other stakeholders pose for a group picture during the World Space Week seminar that was held at UoN. (Right): TU-K School of Physical Sciences and Technology Director Prof. Paul Baki (in red tie) with some of the participants**

of Nairobi, Jomo Kenyatta University of Agriculture Technology and The Technical University of Kenya.

Emuhaya MP Dr. Otchillo expounded on key components space science can play in technology transfer in day-to-day activities that can quickly elevate the country's economic and social growth and status.

"You note that developed countries have not yet stopped developing, this is through innovations and technology," the MP noted adding that Kenya must understand the importance of space science and the big data.

He exhibited the 3i's approach he used in his constituency that has since attracted accolades from technology stakeholders and from other constituencies across the country.

"To achieve growth, leadership and policy makers ought to give it the '3i's framework'; Information, Initiative and Impact to the society," Dr. Otchillo explained.



Countries who have embraced the big data are already gaining valuable investment in terms of social, scientific, economic and strategic goals. 58 countries worldwide spent over 10 million dollars on space in 2013 compared to 2003 and in addition 22 additional countries are putting in place plans for future space investments.

Kenya intends to set up a space

**In order to demonstrate public support for space programmes, Kenya also plans to launch the Space Physics Society of Kenya.**

science laboratory for space science issues with relevant software and facilities such as radio astronomy to encourage greater use of space for sustainable economic development.

Some of the partnerships at TU-K include the Nano Satellite project, Cubesat project and Radio Astronomy project in collaboration with Leeds University of Manchester, England.

In order to demonstrate public support for space programmes, Kenya also plans to launch the Space Physics Society of Kenya.

Last year's theme, "Discovery" celebrated the exciting discoveries in space, teaching about our origins and our future and resulted in 1900 events in 73 countries.

## SPACE SCIENCE DONS JOIN TU-K



**Prof. Paul Baki**, Director, School of Physical Sciences and Technology

The Technical University of Kenya has hired four Physics and Space Science researchers from the just concluded Square Kilometre Array (SKA) training in South Africa and in Kenya.

The scholars are part of the team of 12 who underwent initial study programme of a Mega-Science Radio Astronomy that would set base in Longonot.

According to TU-K School of Physical Sciences and Technology Director Prof. Paul Baki, the university is taking in the scholars to the department to lead in space science research and teaching.

"After the training both in Kenya and South Africa that ended in May this year, the team becomes the first batch of scholars we are preparing for major Astronomy studies taking shape across the African continent," said Prof. Baki.

He said the scholars drawn from local universities including Technical University of Kenya, University of Nairobi, Chuka, Egerton, Moi, Kenyatta and Rongo Universities are doing their Master programmes or PhDs.

"The SKA project funded by United Kingdom government through Newton Fund Project is taking another cohort in September this year for training," Prof. Baki noted.



Some of the Space Science researchers during a training session inside a Physics lab

The project is part of Kenya's build-up mission to strengthen Information Communication and Technology through Big Data Science.

'Big Data', Physics and Space Science is transferable to other sectors including ICTs and inspiration of Engineering Technologies and Science.

According to Prof. Baki who oversees SKA's training process in Kenya, the Longonot Satellite Earth Communication Station is

**The Longonot Satellite Earth Communication Station is undergoing refurbishment that would see deployment of massive research equipment to aid technology and space science studies.**

undergoing refurbishment that would see deployment of massive research equipment, technology and space science studies.

Longonot that served up to 2013 as an Earth Communication station was phased out by fibre optic technology.

Similar trainings are simultaneously running in Namibia and Zambia and later in Ghana, Botswana, Mozambique and Mauritius. South Africa which is the SKA Continent's Headquarters is already steps ahead.

"In five years, renovation of the Longonot Communication satellite will be underway and in 10 year-time, the station will be running," said Prof. Baki.

The massive project running across the continent will give a window to joint and elaborate Astronomy studies in the continent and sharing of collared Big Data with other station across the world.

According to University of Manchester Director of Research, School of Physics and Astronomy Prof. Peter Wilkinson who is the lead instructor in Kenya's SKA project, the initiative in Africa would be the next driver of the continent's economy from building up scientists among young scholars to massive technological innovations.

"The project is not only targeted at pure sciences. It is tuned to building high technology quality ideas, high performance computing and generation of big data," noted Prof Wilkinson.

## TECHNOLOGY INNOVATION 'BLAZE' AT TECHNICAL UNIVERSITY OF KENYA



A TU-K student enquires information from a TECHNO Kenya vendor. Techno was at the university to recruit graduate trainees to be absorbed at the technical and marketing departments under the campaign 'Watch me Grow'

Students at the Technical University of Kenya (TU-K) got to experience the Blaze Wave, a youth innovation by telecommunications giant Safaricom Kenya.

Blaze is a new tariff launched by Safaricom tailored for people below 26 years. The tariff offers a subsidized package with internet bundles, talk time and text messages. Besides the exciting social media access, the young generation equally get easy access to online research via mobile phones.

Being the leader in technology and innovation in the region, TU-K played host to the innovation and marketing campaign in a bid to challenge young scholars to develop solutions through innovation in the society.

Blaze is an innovation targeting the youth where Safaricom involves Kenyan youth below 26 years to participate in its conceptualisation and development of Blaze.

According to Safaricom's

Marketing Executive, Mugure Waithiru, who is spearheading the Blaze campaign, the young innovators are drawn from various universities.

"Youth in Kenya are very talented, passionate and ambitious about life," said mugure. These qualities are important in entrepreneurship. This however calls for training, mentorship, funding, planning,

**"The youth in Kenya are very talented, passionate and ambitious about life. This, however, calls for training, mentorship, funding, planning, networking and discipline." - Mugure Waithiru.**

networking and discipline," she added.

Besides simply enjoying cheaper

rates, students who subscribe to this tariff will also be able to exercise their innovative and entrepreneurship skills.

The campaign has put up a mentorship summit dubbed 'Be Your Own Boss' (BYOB) intended to encourage young people to venture into entrepreneurship. The BYOB summit provides platforms to nature talents and innovation around career paths including, music, art, media, content production, fashion, graffiti, film, photography, technology, entrepreneurship, agriculture among others.

During the BYOB sessions, students will get a chance to tell their stories, share their ambitions and interact with mentors who will inspire and guide them on their journey to growing their careers.

The BYOB summit will also offer an opportunity to the youth to audition for the Blaze TV show, that will offer a select few the opportunity to compete for start-up funding.

# STUDENTS SHINE AT SAMSUNG ACADEMY



**Samsung Electronics East Africa Vice-President and Managing Director, Jung Hyun Park**



**Graduates pose with certificates after the ceremony**

The Technical University of Kenya (TU-K) is a top institution in training hands-on-skills.

The University was fated at a colourful Samsung Engineering Academy graduation ceremony, recently held at a Nairobi hotel.

While receiving the award on behalf of TU-K, the Executive Dean Faculty of Engineering Sciences and Technology (FEST) Prof. Alex Muumbo, accompanied by the Director, Centre for Engineering Innovation and production, Dr. Erick Ogur, thanked the academy for starting the initiative which he said, shapes the future of technology in the country.

"This is a culmination of efforts that have seen our students gain a lot of experience and the culture of practical skills. I wish the country replicates this if it has to change for the better," said Prof. Muumbo.

The Dean thanked Samsung for partnering with education institutions and called for more collaborations and partnerships between universities, industry practitioners and professionals in the training activities.

TU-K produced the best overall

student, Carolyne Mwikali David, who is pursuing a Diploma in Technology (Electrical and Electronic Engineering). Paul Kung'u Muthoni also from TU-K and pursuing the same course, took the second position. John Mark Nthiga from Multi-Media University came third. The winners took home smart TVs 48-inch, 42-inch and a 32-inch respectively.

58 students from various

**The academy was launched four years ago. It has seen students graduate with hands-on practical skills.**

universities and Technical Institutions graduated from the academy. This is part of the Samsung's broader goal to develop skilled electronics technicians and engineers across the country.

The academy was launched four years ago, has seen students graduate after gaining hands-on practical skills. Samsung Electronics East Africa Vice-President and Managing Director, Jung Hyun Park,

said the Academy's primary goal is to develop technicians, technologists and engineers across the country to address the critical technical and engineering skills shortage that exist in the job market.

"Our focus is on those pursuing Electrical and Electronics Engineering, Information Technology, Scientific Computing and Mechanical and Telecommunication Engineering. The top performing students are offered an internship at Samsung Electronics or its service partners and thereafter work as independent service technicians or employees within their respective regions," added Mr. Park.

The nine-month course taken by the students constitutes 20 per cent theory, while the practical work covers 80 per cent. The course is divided into five modules; Hand-held products, laptops and printers, consumers' electronics, air conditioning and soft skills.

The student selection was done competitively from Samsung partner institutions; TU-K, Jomo Kenyatta University of Agriculture and Technology, Multimedia University, Machakos University, Kabete National Polytechnic and Nairobi Technical Training Institute.

The Vice-Chancellor Prof. Francis Aduol has reiterated the University's commitment in upholding Social Sciences saying that they are the back bone of other disciplines.

"Science and Technology cannot prosper without Social Sciences. For people to operate well in any society, they need extensive skills for instance in music, communication, among others," he said.

Prof. Aduol spoke recently when he hosted a conference by the International Music Council. The Council has been organising internships and exchange programs for students pursuing music, for the last three years, through the African Music Development Programme (AMDP).

TU-K and Makerere have taken part in the programme for three consecutive years. Both universities send students for exchange programmes as well as internships.

Prof. Aduol commended the team and urged them to market Music throughout the world. He advised students aspiring to study music in universities and institutions of higher learning,, to go for it.

"In most universities, very few students apply for music courses because they think it has no useful career. I want to advise you that there is life after studying music and therefore go for it and give it the seriousness it deserves," he emphatically said.

The VC observed that TU-K was rated highly in music and therefore attracted students with higher grades.

"Music Department is the youngest but strongest and has a team of dedicated staff and enthusiastic students. Over the years, we are concerned with the person we produce and not just the equipment," Prof Aduol said.

The Conference brought together universities from Cote d'Ivoire, Kenya, Uganda and Congo. Music festivals from Swaziland,

# INTERNATIONAL MUSIC CONFERENCE HELD AT TU-K



**TU-K Vice-Chancellor Prof. Francis Aduol (Center), Secretary General of the International Music Council Silja Fischer (Left) and Charles Houdart, responsible for Africa Music Development Programme, were among guests that graced the conference.**

Mozambique and Morocco were well represented.

The discussion on the ways of continuing with the programme for instance by reducing costs among other measures, took centre stage. The team agreed to develop a proposal that will seek funding.

The conference further received

**"In most universities, very few students apply for music courses because they think it has no useful career. I want to advise that there is life after studying music and therefore go for it and give it the seriousness it deserves."**

**-Prof Francis Aduol.**

and acknowledged reports by TU-K student Edmond Obillah who went for two months internship in Shoko Zimbabwe and Michelle Bisonga who was attached at a university in Cameroon.

The students' witness account on the exchange program formed a discussion on the importance of writing and presenting articulate reports after every attachment.

TU-K was represented by Deputy Vice-Chancellor in charge of Academics Research and Students (ARS) Prof. Paul Shiundu and Executive Dean, Faculty of Social Sciences and Technology (FSST) Prof. Emily Akuno. Other dignitaries present included; Secretary General of the International Music Council Silja Fischer, Charles Houdart, responsible for Africa Music Development Programme among others.

# WAMALWA OBTAINS A PHD IN MATHEMATICAL STATISTICS

**A** Senior Assistant Registrar at the Technical University of Kenya was the only Doctor of Philosophy graduand in Mathematical Statistics during the 55<sup>th</sup> graduation ceremony of the University of Nairobi that was held on 2<sup>nd</sup> September 2016.

Moses Wakoli Wamalwa wrote a thesis whose title is "Hazard functions of exponential mixtures and their link with mixed poisson distributions".

He was motivated by Walhin and Paris (1999), who defined a class of mixed Poisson distribution in terms of the derivative of some function. While re-examining this definition,

Wamalwa realised that this derivative is a hazard function of type 1 exponential mixture and thus determined that there is a link between mixed Poisson distributions and exponential mixtures.

He therefore redefined the mixed Poisson distribution in terms of the hazard function of an exponential mixture. In so doing, he was able to show that there is a link between exponential and Poisson mixtures, such that a hazard function of an exponential mixture characterises an infinitely divisible mixed Poisson distribution, which is also a compound Poisson distribution.

Wamalwa established that since a hazard function of an exponential mixture is completely monotone, then the mixing distribution is infinitely divisible through Laplace transform; and a Poisson mixture with an infinitely divisible mixing distribution is infinitely divisible too. Further, an infinitely divisible mixed Poisson distribution is a compound Poisson distribution. He also constructed the compound poisson distribution recursively in terms of the probability mass function (pmf) of the independent and identically distributed (i.i.d.) random variables and the hazard function of the



Dr. Moses Wakoli Wamalwa

exponential mixture.

Given the importance of hazard functions of exponential mixtures in the development of these models, the hazard functions have been constructed using continuous mixing distributions through probability density functions and survival functions, and using

**"He was able to show that there is a link between exponential and Poisson mixtures, such that a hazard function of an exponential mixture characterises an infinitely divisible mixed Poisson distribution, which is also a compound Poisson distribution."**

Laplace transforms of probability density functions in continuous compound distributions. The models developed were applied to a class of mixed Poisson distribution known as Hofmann distributions.

In many applications, especially those for biological organisms and mechanical systems that wear out

over time, the hazard rate is a rate of change function also known as failure rate function in reliability engineering and the force of mortality in life contingency theory. If  $Nt$  is the number of changes or failures in the time interval  $[0, t]$  and  $T = t$  is the time until the occurrence of the first change, then  $pn(t) = Prob(Nt = n)$  is an infinitely divisible mixed Poisson distribution, which is also a compound Poisson distribution.

The tools or methodologies in this study include; special functions, which have been used to construct some mixing distributions and exponential mixtures; transformations, which have been used to obtain moments of the mixtures that are in terms of the modified Bessel function of the third kind and confluent hypergeometric function; generating functions, which have been used to determine the corresponding mixed Poisson distribution and the pmf of the iid random variables; conditional expectation, which has been used as an alternative technique in cases where the Mellin transform fails.

Wamalwa also holds a Bachelor of Education degree, majoring in Statistics, from Kenyatta University; and a Master of Science in Population Studies from the University of Nairobi (PSRI).

It is indeed a great achievement for Wamalwa to have successfully completed a PhD in Mathematical Statistics at the School of Mathematics, given his busy schedule as head of Examinations Office at TUK.

He has since published two research papers in the Mathematical Theory of Modelling Journal published by the International Institute of Science and Technology (IISTE) and he has lined up 4 more papers that are ready to be published.

## KENNEDY RONOH KIBET

Mr. Kennedy Ronoh has been appointed an Assistant Lecturer at Technical University of Kenya's Department of Computational Science and Technology. He is currently a Computer Science PhD student at the University of Nairobi (UoN). He holds a Master of Science Degree in Electrical Engineering, Wireless Networks and Electronics major from Linköping University, Sweden - 2012, and holds a Bachelors Degree in Computer Engineering from Moi University. Up to his appointment at TU-K in April this year, Mr. Ronoh was a Tutorial Fellow at Machakos University College.



## BENARD OWUOR



Mr. Bernard Owuor has been appointed a Lecturer at Technical University of Kenya Design and Creative Media Depart. Owuor has eight years of Lecturing and as a Consultant with a specialisation in Post Production - Film and Video. He holds a Master of Arts Degree in Post Production - film and Video Editing from Bournemouth University - 2008, United Kingdom, registered for a PhD Degree in Film Technology at The Technical University of Kenya. He holds a Bachelor's Degree in Telecommunication/ Electronic Media from Texas Southern University, United States of America (USA).

## MAUREEN M. NJENGA

Ms. Njenga has been appointed as Tutorial Fellow at the Department of Music and Performing Arts. Until her appointment, Ms. Njenga was an Assistant County Commissioner at the Ministry of Interior and Coordination's Department of State Functions where she was charged with responsibilities among them organising and coordinating of state functions including writing of directives and pronouncement given by the President.



## DR. ARUN DATTA

Dr. Datta has been promoted to a Senior Lecturer position at Technical University of Kenya's Department of Centre for Science and Technology Studies (SPST). He holds a PhD in Philosophy from University of Nairobi (UoN) - 2011, a Master of Arts Degree in Philosophy - UoN, Master of Science in Mathematics - H. P. U India and a Bachelors Degree in Mathematics, Physics and Chemistry from P. U. India. Dr. Datta has in his belt 10 publications, three of them still under research.



## BARRY ONYOYO

Onyonyo Barry Michael has been promoted to an Assistant Lecturer at Department of Architectural and Environmental Design. Prior to his promotion he was a Tutorial Fellow. He holds extensive project architect experience in managing design and construction teams, codes interpretation and optimisation, building standards, regulations and practices applicable to design, construction supervision and project management. He is a certified member of Board of Registration of Architects and Quantity Surveyors (BORAQS), also a corporate member of the Architectural Association of Kenya (AAK). He holds both a Postgraduate degree in Architecture: Urban design (2014) and an undergraduate degree in Architecture (2008) from the University of Nairobi.



## DR. JOSEPH MUSILWA KEDOGO

Dr. Kedogo has been appointed as a Lecturer at the School of Architecture and Built Engineering (SABE). He has 14 years of academic research and teaching experience in local and international universities, development organisations and a 15-year architectural practice in East African's private sector. Kedogo is a PhD holder in Architecture from Technische Universität Berlin (TU Berlin) Germany, Master of Science in Technology and Resource Management in the Tropics and Subtropics with a Major in Integrated Planning and Building - 2009 from Cologne University of Technology, Arts and Sciences (TH Köln) Germany.



# CHAMPAGNE AND ANXIETY: DIARY OF A PHD COMPLETION



Deborah Netolicky thought that the submission of her PhD was the end, but now she realises that it is just the beginning.

I really didn't think that the very pointy end of my PhD, once I knew that my thesis amendments had been approved by my supervisors, would be complex. Surely there would be a quiet moment of joy followed by the pop of a champagne cork? Well, I was right about the champagne, but the last week has been more of a roller coaster than I imagined. It turns out that finishing a doctorate is wound up in some messy identity-entangled feelings. Here, I try to give a sense of what that looked and felt like for me.

My week's diary of PhD completion went something like this:

**Friday:** Supervisors sign off on the amended thesis. Form goes to the dean for university sign-off. Elation. Excitement. Light can be seen at the end of the tunnel. Hugs. Champagne. I tell my kids. My 5-year-old shouts "Woohoo! No more PhD!" I remember that I've been doing this most of their lives (they were six months and two years old when I started; now they are 4 and 5).

**Saturday and Sunday:** Checking and rechecking the thesis, especially the amendments. I fully proof the first and last chapters, line by line, punctuation mark by punctuation mark. Obsess

over commas and hyphens, or the lack of commas and hyphens. Wonder why I'm so unable to let go of a document that I've been told is done. My husband takes me to lunch on the coast on a glorious day. I drink a Bellini. We "cheers" to the thesis being done.

**Monday:** Dean signs off on my thesis. It's through. Accepted. Officially done. I jump up and down. Whooping. Air-punching. Triumph.

**Tuesday:** I'm still tinkering with the already-approved thesis. I'm haunted by nightmares and daydreams of mistakes existing somewhere in the 300-page document despite it being checked by me, two supervisors and three examiners. Impossible obsession with checking over and over. And over. I keep reminding myself the thesis has been signed off. It is

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**"It turns out that finishing a doctorate is wound up in some messy identity-entangled feelings"**

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considered doctorate-worthy. I save the document as a PDF to stop myself from my compulsive tinkering. I sneak another peek. OK, maybe more than one.

**Wednesday:** Wake with a cracking headache, knowing that today is the day I print the final final copies for permanent binding (buckram cloth! gold letters!). One



Academic procession during a past TU-K graduation ceremony

will live on the library shelf (maybe never to be opened). Anxiety builds as I worry that this final copy means there can be no more tinkering. I am overwhelmed by the pressure of printing the tangible final pages. It's a relinquishing of control. If there are errors, they will be inked there for eternity. I feel increasingly ill as I print and check the final copies of my thesis. I take the box of printed pages in to the university and submit them to the library to be sent for final binding. I drive to pick up sick child from school; no time to savour the moment. I upload the thesis document to the university library. Fall into a heap of exhaustion and hollowness. It's the thesis finishing comedown, an emotional and energetic crumbling, a descent into the post-thesis abyss. I tweet

my feelings of emptiness and strangeness. Responses come: yes, the mourning, the crash, the void. Others have felt this, too. I head out for dinner and champagne. Company helps and I'm reminded that - without lab partners, a writing group or colleagues at the university - my journey is mostly in my head. I've been the working mama who comes and goes from uni in a blinding flash, working mostly alone, often in the night. It's good to be out, and to talk about it. And to talk about other things to forget about it.

**Thursday:** I get word that my thesis is online. There it is, a citation with my name on it, and a downloadable document. My thesis title in black and white. My words out of my head and into the world. My work now in the public realm.

Elation again. Pride. And then the crack of the imposter syndrome whip. I hadn't felt it until now. I was perfectly comfortable being a PhD candidate. An eager student. A work in progress. Of course, I am still a neophyte. A partially-formed apprentice scholar. I realise I'm almost doctored, but feel unworthy of the title. I know I've worked hard for this. My family has both sacrificed and benefited from my doing the PhD; we've lived it. I know I've walked the path that

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**"I know I've worked hard for this. My family has both sacrificed and benefited from my doing the PhD; we've lived it"**

---

leads to the "Dr" and the medieval flourish of the Tudor bonnet. Yet I hear Macbeth's line in my head: "Why do you dress me in borrowed robes?" My sense of identity hasn't caught up with the reality of finishing the PhD. My new almost-doctor-ness feels ill-fitting. My never ending PhD story is coming to an end. Or is that a beginning? When I started the doctorate, I saw its completion as the pinnacle. Now I realise it's entry level.

**Friday:** I notice missing Oxford commas in the text. I begin to think about the work I've now projected out into the world. I remember how non-traditional my thesis is. That it was risky. That some might be inspired by my novel approach and others bemused or horrified. I reflect on how I have attempted to push at the boundaries of what an acceptable thesis is. I've worked within the accepted parameters of a thesis (introduction, literature, method, results, discussion; some use of the distant academic voice). But I've also challenged the traditional thesis genre by embracing creativity, shifting voices and a literary lens as a way to make meaning. I wonder how my attempt to create a text that compels and propels the reader will be received now that it lives outside of my laptop and my head. I'm comforted by accepted journal articles and conference papers that affirm that my work fits somewhere. I breathe.

The ride continues. Maybe soon, I'll grow into the robes.

Deborah Netolicky is a teacher of English and literature at an Australian school, where she also leads a coaching intervention for teacher growth. She studied for her PhD-Down the rabbit hole: Professional identities, professional learning, and change in one Australian school - at Murdoch University. Her thesis was completed this month and her doctorate will be conferred in April. This post originally appeared on her blog.

## NOBEL LAUREATE WOLE SOYINKA: 'I WANTED TO SMASH BUST OF CHURCHILL'



The university professor and former political prisoner compares his own iconoclastic impulses to Rhodes Must Fall movement

Wole Soyinka recalls the moment he came face to face with what he saw as a symbol of colonial oppression on campus.

As a visiting fellow at Churchill College, Cambridge in the mid-1970s, the renowned Nigerian dramatist and poet would pass a bust of Winston Churchill on the college staircase each day.

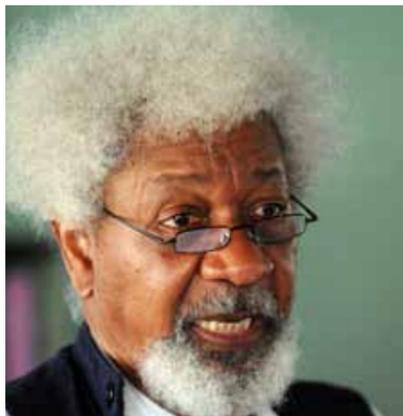
"Each time I came down the stairs and saw that bust, I had an overwhelming urge to push it down and see it crash," said Professor Soyinka, who in 1986 became the first black African to win the Nobel Prize for Literature.

"Churchill was representative of British imperialism - he was quite insistent that what Britain had in Africa it should hold," added Professor Soyinka in an interview with *Times Higher Education*.

Speaking at Soas, University of London, where he had been interviewed by its director Baroness Amos for the college's Centenary Lecture series, Professor Soyinka explained how those encounters with Churchill's bust inspired what many view as his greatest play, *Death and the King's Horseman*. The 1975 drama was based on a real incident in 1946 in which a colonial district officer intervened to prevent a local man committing ritual suicide.

"I eventually sublimated those feelings into *Death and the King's Horseman*," said Professor Soyinka, who has held professorships at Nigeria's University of Ibadan and University of Ife (now known as Obafemi Awolowo University), as well as visiting academic posts at the universities of Harvard, Yale and Oxford.

In contrast, over the past 18



Professor Wole Soyinka

months, students repelled by what they see as similar symbols of racism and imperialism have not sought to sublimate or repress such feelings. Since the Rhodes Must Fall movement began at the University of Cape Town in March 2015 in protest against the continued presence on campus of a statue of colonial ruler Cecil Rhodes, students

**"Churchill was representative of British imperialism - he was quite insistent that what Britain had in Africa it should hold,"**  
-Professor Soyinka

across the world have mobilised to call for the removal of other politically charged statues, plaques and honours.

Professor Soyinka described the movement as "understandable" and said that authorities should think hard about whether to retain controversial symbols, such as the small statue of Rhodes above the entrance to Oriel College, Oxford.

"If decolonisation is to be fundamentally embraced by Britain and if it is to show some level of contrition [for its imperialist history], they should not have these kind of symbols," he said.

However, Professor Soyinka said

that he recognised the extreme difficulty faced by Oriel, as Rhodes has been woven into the fabric of the university for decades.

"His name is synonymous with Rhodes scholarships, so it is far more complex than many people see," he said, adding that Oriel is a "British college and they can have the symbols they choose".

"The history of Britain is not mine, and they are entitled to preserve symbols that are negative to me," he said.

Indeed, Professor Soyinka is far more critical of his own native Nigeria for its failure to confront unpleasant aspects of its own history - not least the memorials to the notorious former president Sani Abacha, who is alleged to have stolen about £5 billion from his country, as well as having forced Professor Soyinka into exile in the 1990s after he was accused of treason.

"I was talking to [current Nigerian] President [Muhammadu] Bahari and asked him, 'Why is a major street in Nigeria still named after the greatest thief, torturer and reprobate our country has ever seen?'" said Professor Soyinka.

"He seemed surprised and said it had never occurred to him, so I replied, 'You are campaigning against corruption, yet you are teaching young people that a major street can be named after you if you are corrupt,'" he added.

Still hailed as a powerful force in Nigerian politics and cultural life, Professor Soyinka - who spent 28 months behind bars as a political prisoner in the 1960s, including 22 months in solitary confinement - also spoke of his debt to Britain, from his childhood obsession with the novels of Charles Dickens to his time as a student at the University of Leeds in the 1950s under the supervision of the great Shakespearean scholar G. Wilson Knight.

**First published by Times Higher Education in November 2016**

## MEGA FRENCH VARSITY IN THE OFFING



Imagine the chagrin of French universities whenever international rankings are published. But what about the French, with their centuries of scholarship and ancient institutions? There was a university in Paris before Oxford or Cambridge.

As part of a huge government-driven academic and economic project, there will be a new university called Paris-Saclay, with a campus south of the French capital. The project has initial funding of 7.5bn euros (£5.9bn) for an endowment, buildings and transport links.

The French government is bringing together 19 institutions into a single structure, with the aim of building a university big enough to compete with global giants like Harvard or the Massachusetts Institute of Technology (MIT).

The top places are invariably filled with the US and UK academic powerhouses. And then coming up fast are the ambitious Asian universities. But what about the French, with their centuries of scholarship and ancient institutions? There was a university in Paris before Oxford or Cambridge. French universities are conspicuous by their absence.

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The French government is bringing together 19 institutions into a single structure, with the aim of building a university big enough to compete with global giants like

Harvard or the Massachusetts Institute of Technology (MIT).

The university, south of Paris, is planned as a hi-tech «knowledge hub» to drive the French economy. Dominique Vernay, the president of this new university, says that within a decade he wants Paris-Saclay to be among the top ranking world universities.

In university rankings, big is beautiful, and the Paris-Saclay will have 70,000 students and 10,000 researchers. There will be an emphasis on graduate courses and recruiting more international students and staff.

The idea of bringing together individual colleges into a «federal university» has been borrowed from the UK.

**The big idea is to create a "knowledge hub" around Paris, bringing together top-level universities with research institutes, hi-tech businesses and start-ups.**

«Our model isn't that far from the Oxbridge model," he says.

To put it into scale, Mr Vernay says Paris-Saclay is going to be twice the size of the University of California, Berkeley, one of the flagships of the US university system.

Without any extra investment, he says that the existing component parts of the university will put Paris-Saclay straight into the top 20 of the Shanghai global university rankings.

It will inherit staff with Nobel Prizes and some very well-established founding partners, including the Ecole Polytechnique,

the HEC Paris business school and the National Centre for Scientific Research (CNRS).

Getting into the top end of the league tables is not the purpose of the investment, he says. But it would be an important indicator of how France can create a much more concentrated and globally competitive research base.

The big idea is to create a "knowledge hub" around Paris, bringing together top-level universities with research institutes, hi-tech businesses and start-ups.

The classic example of such a project would be Silicon Valley in California where Stanford University has been the launchpad for firms such as Google and Hewlett Packard.

But in this industrial geography of the internet age, with the emergence of these academic-industrial complexes, Paris has been falling behind.

"The essence of the plan is that we are missing growth in France. It's not the big companies, what we're missing is the new technology, those small companies that grow very fast and become new players," said Mr Vernay.

"We need to strengthen the links with industry, strengthen our ability to launch start-ups."

The president says that the Paris-Saclay project should be seen as part of the next great historic wave of French higher education.

The grand ecole that produced the scientists and administrators for Napoleon's empire were very successful specialist institutions. And investment after World War Two supported more research in specialist areas, such as nuclear power.

## TEACH STUDENTS ACADEMIC WRITING OR ENDANGER DEGREE COMPLETION: STUDY



Universities should make it a priority to equip graduate students with academic writing skills or they run the risk of greater numbers failing to complete master's courses and PhDs, according to the author of new research.

In her co-authored paper "Graduate students as academic writers: writing anxiety, self-efficacy and emotional intelligence", Margarita Huerta, assistant professor of educational and clinical studies at the University of Nevada, Las Vegas (UNLV), found that lack of "self-efficacy" (belief in one's capability to write in a given situation) was a significant reason for writing anxiety among students studying for a master's or doctoral degree.

The researchers conclude that it is in universities' "best interest" that students are given tools to allow them to "successfully communicate ideas and innovation in writing". Professor Huerta told Times Higher Education that degree completion rates could fall if these issues were not addressed.

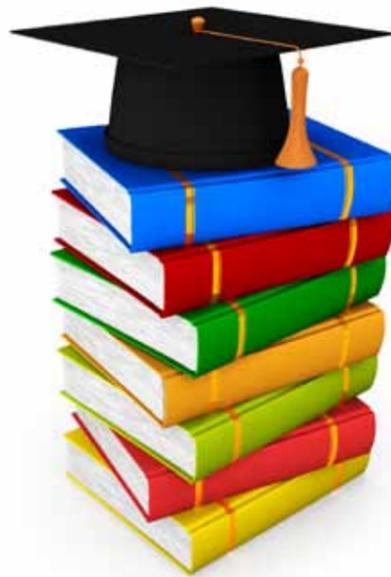
"Most graduate student writers come into academia without the knowledge and skills of how to handle large, complex academic writing projects; therefore, lowering their self-efficacy," she said. "The consequences are potentially slower graduation rates, larger numbers of incomplete degrees and non-published theses/dissertations."

The growing expectation for students to have "journal article publications prior to graduation" was increasing the pressure on graduate writers, she added.

The research, published in the

Higher Education Research & Development journal, looked at 174 students participating in Promoting Outstanding Writing for Excellence in Research (POWER) programmes, created by UNLV in 2007 to provide emotional and instrumental support for graduate students who wish to improve their academic writing.

While the researchers noted that the study was not "generalisable to all graduate students in higher education", the findings "contribute to the limited research on graduate students and academic writing and can inform present practitioners and future researches in varied settings".



The paper also found that "females exhibited higher writing anxiety", which Professor Huerta suggested could be linked to wider gender inequality in higher education. She added that it was "concerning that even in the presence of self-efficacy, writing

anxiety was still present for female graduate students".

Elsewhere, the study found that students for whom English was not their first language had "statistically significant higher writing anxiety and lower self-efficacy compared to native English speakers".

"International students also showed statistically significant lower self-efficacy than students who reported not to be international," it states.

Professor Huerta said universities believe that they are supporting international students by providing "editing services" or English language courses, but warned that there was "a lot more" to mastering academic writing than a command of English.

"Writing 'correct' English is merely one piece of the bigger puzzle of supporting graduate students' academic writing," she said. "Schools/HE sectors should not assume all non-native English speakers' writing skills are necessarily lower than native speakers' writing skills."

"While some may struggle with writing skills, many may have very strong writing skills. Non-native English speakers may just have more writing anxiety because of lack of initial confidence and other external/cultural factors."

Universities should therefore look to improve self-efficacy among all their graduate students by teaching "self-management skills related to piecing together academic writing projects".

"This is why peer-led writing support services hold tremendous potential if implemented well within university structures," she said.

**First published by Times Higher Education**

## DONS BLAME 'VINDICTIVE' STUDENTS FOR POOR COURSE EVALUATIONS



*Badly rated teachers more likely to distrust data, Israeli study finds*

Do resentful students get their own back on teachers by giving them lower marks in course evaluations? If Israeli academics are to be believed, they do.

A survey of 2,241 scholars working in the country's higher education institutions found that nearly three-quarters (73 per cent) believed that students used evaluations in a vindictive manner, while more than half (52 per cent) thought that low-achieving undergraduates tended to give lower scores.

A significant minority (37 per cent) felt that course evaluations led to grade inflation, although more respondents (45 per cent) disagreed with this statement.

Lead author Ronen Hammer, head of the teaching improvement centre at Holon Institute of Technology, said that the findings were concerning because, regardless of whether or not these assumptions were correct, the fact that they were so widely believed raised questions about whether academics would engage with evaluation scores in order to improve their teaching.

In the survey, 55 per cent of respondents said that course evaluations "lack reliability and validity", while 56 per cent said that students were "too immature" to assess teaching quality.

Opinion was split over whether students' ratings were unreflective of actual learning (43 per cent agreeing and 45 per cent disagreeing) and whether evaluations were a popularity contest (41 per cent agreed, 48 per cent disagreed).

Interestingly, academics who



**Students in class**

felt that their teaching ability was underrated were significantly more likely to question the validity of evaluations.

Overall, 37.5 per cent of respondents felt that they were underrated, while 48 per cent felt that there was no gap between evaluations made by students and by themselves. Only 14.5 per cent

**"In many cases course evaluations are the only tool that management has to get information about the performance of faculty members, and it is the major tool faculty members have to receive feedback."**

of academics felt that students overrated their ability.

Dr Hammer, who conducted the research in 20 institutions with Eyal Pe'er of Bar-Ilan University and Elisha Babad of the Hebrew University of Jerusalem, said that the results suggested a need for managers

to draw on alternative sources of information about teaching quality, such as peer assessments, alongside course evaluations.

"In many cases course evaluations are the only tool that management has to get information about the performance of faculty members, and it is the major tool faculty members have to receive feedback," he said.

"I think faculty members would feel better if it was not so exclusive and if there were additional sources of information for assessing their performance."

The survey, which is the subject of a forthcoming journal article, did find some positive views about course evaluations. Sixty-three per cent of respondents said that the data help them to identify weak aspects of their teaching, and 51 per cent said that they trusted students' evaluations.

Forty-eight per cent of respondents felt that student evaluations should be a factor in decisions relating to promotion and tenure.

**First published by Times Higher Education**

## JOYCE NYARUAI TOPS TEAM IN GLOBAL CHESS TOURNAMENT HELD IN BAKU



Nyaruai (front right) for Kenya in action against an opponent from Barbados



Nyaruai pose for a picture next to a scoreboard after playing Sandford Segan of Barbados

Joyce Nyaruai, scored the highest points leading a team of four in the just conclude global 42<sup>nd</sup> Olympiad games in Baku, Azerbaijan, Eastern Europe.

The third year student at TU-K pursuing a Bachelors degree in Electrical and Electronic Engineering, dominated majority of her games with an aggregate of six point five points out of seven in the seven games she played. One of the games was a walkover.

Nyaruai is a WCM holder, a recognition title in Chess rankings.

The team posted excellent results inspite of the travel challenges that delayed their departure for four days into the competitions that began on September 1.

Like her colleagues, the overall games Nyaruai were expected to play were 11, she completely missed four of them.

Travel sponsorship arrangements by Chess Kenya that would have seen Kenya's team of ten both men and women participate in the bi-annual Olympiad games were shot down leaving only four players to travel.

Air ticket sponsors pulled out in the last minute. The four female players who managed to travel to



Nyaruai (Left) with Kenyan teammates tour Baku city.

Baku secured their tickets from independent sponsors. The host secured accommodation and movement in the Olympiad village.

"From my qualification to Olympiad, I vowed to clinch the Women FIDE Master, a prestigious chess title. Travel challenges however messed my personal target," she noted.

Nyaruai said the team's spirit was not dampened by the challenges, "We went into competition

midway but landed with a bang thrashing competitors including our neighbours Uganda who have been our major regional rival.s"

Besides the game, the team toured the city's historic sites, cultural events among them Bermuda Party, a celebration organised by the host to crown the Olympiad.

"The global games were well organised and professionally handled," Nyaruai noted.



TU-K's hockey team

## TU-K HOCKEY TEAM SMASH DAYSTAR TO QUALIFY FOR NATIONAL LEAGUE

The Technical University of Kenya beat Daystar University to top the 2016 Kenya Hockey Union Men's Championship.

The final match sealed their lead with a final 24-point defeating opponents 5-0 to qualify for the National League Championship.

The Hockey Union competition brought together 11 teams drawing from universities across the country and clubs to battle it out. They included Multimedia University, Dedan Kimathi University of Technology, Kabarak University, Karate Club, Wazalendo Youth, Impala among others.

TU-K received the trophy at City Park on Sunday November 27, the ground on which they played Daystar during their final match.

TU-K's scorers were Gideon Kimuge, Nimrod Bisonga, Leonard Marwa, Luckie Mwendwa and skipper Moses Obushuru.

Kimuge opened the firing in the second minute to the game and in the 11<sup>th</sup> minute, Bisonga gave it another shot past Daystar keeper Dennis Amadi.

Team Manager Simiyu Nyaranga praised the boys saying they



TU-K's hockey team celebrate after winning the Hockey Championship

displayed a professional game.

"Our target at the beginning of the season was a top five finish and this has totally surpassed our expectation. The lads should savour the moment because they fully deserve it after their impressive performance this season," the team's coach Alex Nyawira said.

Nyawira said discipline, hard work and endurance carried the team through the season and are now ready for the big league.

"We appreciate TU-K through the Sports and Regulations Department for facilitating the team all through, we are prepared to achieve much better results in the next season," added Simiyu.

TU-K Hockey team has in the past posted excellent results in competitions including Kenya Universities Sports Association games (KUSA).

# WE ARE THE CHAMPIONS

*TU-K FC rules the roost and leaves other teams in awe*

The Technical University of Kenya Football Club (TU-K FC) are the champions of the inaugural SportPesa Super Eight Champions League. TU-K FC cruised past a resilient Jericho All Stars with a convincing 3-1 win during the exciting final staged at a fully packed Nyayo National Stadium on November 6.

TU-K FC who won last year's SportPesa Super 8 Premier League came into the match as pre-match favourites and lived up to the expectations to claim the trophy and the Sh500,000 winners prize. Jericho received Sh250,000 for finishing runners-up.

The West Conference big-shots were again on the path to glory in the clash billed as West vs East final, after failing to defend their SportPesa Super 8 premier league title, which Kayole Asubuhi walked away with in September.

After winning the 9<sup>th</sup> edition of the SportPesa Super 8 Soccer Tournament in 2015 in style, TU-K were left immensely devastated after failing to retain the title in September, even though the stakes had been raised astronomically after the tournament achieved league status, thus becoming the SportPesa Super 8 Premier League (SPS8 PL), thanks to a sponsorship deal between Extreme Sports Limited, the company that runs the league and sponsors SportPesa.

Coached by Mr Lukas Aluoch and assisted by Francis Oduor, TU-K have demonstrated why they deserve the West Conference Kings tag. On their way to the final, they beat Meltah Kabiria 5-4 in the semi-finals of the SPS8 Champions League as a result that earned them a ticket to the final.

After a goalless first half, TU-K opened the scoring in the 53<sup>rd</sup> minute through Calvin 'Marcelo' Odhiambo who rose high to head in Stevens Odhiambo superb cross from



**TU-KFC celebrate after winning SportPesa 2016 tournament**

a corner. Jericho who seemed to be under pressure from their noisy fans, upped the antennae in search of an equaliser but their efforts were heavily thwarted by TU-K's well drilled backline.

Sensing Jericho's nervousness, TU-K increased the pressure and got their reward as Jeconiah Uyoga made a brilliant run in the left wing before feeding Emmanuel Ateti who scored.

Eddie Kuria would net Jericho's only goal in the 86<sup>th</sup> after he found himself unmarked inside TU-K's box to fire home a strong shot past a

**"TU-K FC train every day in the evening and their dreaded striker Jeconiah Uyoga has been one of their main weapons of destruction. Uyoga is the clubs leading scorer with 26 goals"**

hapless goalkeeper Paul Maina. Any hopes of a Jericho comeback were, however thwarted when Uyoga, the leading scorer with 16 goals, collected a loose ball from the center of the field and made a dazzling run before sending a thunderbolt past the opposition's goalkeeper Eric Ogwenda.

"The match was tough but we were able to contain our opponents and emerge winners. I congratulate my players for clinching the title," said TU-K head coach Aluoch.

Coach Francis Oduor: I am elated by the win because we failed to defend our league title in September. I want to thank the players for playing according to script during this do or die match. Our zeal and determination to win has finally paid off."

His opposite number Thomas Okongo blamed his teams wastefulness. 'I want to congratulate our opponents for their win and I think had my boys capitalised on the many chances they created, we would have won,' said Okongo.

# THE SIMON MAKONDE PHENOMENON

**SERIOUSLY KENYAN SPEAKING**

Back in the day, when I was in Primary school, I remember reciting about this character called Simon Makonde. I can't really recall how the story flowed but I remember, Makonde, was born on Monday and died on a Saturday.

That part I can't forget. In a stint between Tuesday to Saturday, he went to school, married and got sick...!

In the short span that was his life, Simon Makonde accomplished what most people take a lifetime to accomplish. But then again, maybe the author of the Makonde story had something else in mind when he put his life span to within a week. Perhaps, a week in Makonde's life could have been 20 years, 50 years... heck who knows, maybe even 100 years! But at age 8/9 years when I was reading this, I couldn't comprehend what I do now. In my infant thinking, a week was a week and I will stick to that analogy.

Makonde epitomises a "perfect" life for a perfect human being. A life without the stress & strife of recession. A life perfected and mastered at the blueprint. But then again, if my memory is doing me justice, I think he got sick on a Thursday and was taken to hospital on a Friday, I guess he had his own strife.

Ok, where am I going with this? Well, I was drawing from this analogy how most people live a Makonde shell life.

Everyone wants to become significant in life. It is an inner desire which every human being deeply harbours within them. I believe no one enjoys the humiliation of failure or the frustration of a mediocre standard of life: we all want more enriching experiences of life.

But then again mediocrity sets in when you begin to compare and rate yourself with the standards or performance levels of others. The

only repercussion is that you will most definitely end up being the best of the worst and the worst of the best since you are not at your personal best.

When you are a Makonde, you want to accomplish too much within a short span. Some have however done just that: achieved a lot in a short span: I don't deny, there's always an exception to each "rule". Others on the other hand have put onto themselves undue pressure and stress trying to make it: some have faked to make it.

The Makondeism is manifest in our workplaces. We strive to elevate our positions at work by getting ahead at all costs. Again, nothing wrong with that. However, we step on the toes of our colleagues, stab them in the back

## SHORT STORY OF SIMON MAKONDE

Simon Makonde was born on Monday  
He was baptised on Tuesday  
He got married on Wednesday  
He got sick on Thursday  
He went to hospital on Friday  
He died on Saturday  
He was buried on Sunday.

to gain favour from our bosses and reinforce promotion chances.

I find it disturbing the way people have this misplaced notion that Monday is the blacklisted day of the week. If you want to see what I mean: just check on your previous social status updates; be it on facebook or twitter and those of your friends with regards to Mondays. Get my point?

On the flipside, Friday is the most happening day of the week. Infact research has shown that stress levels reduce 90% on Fridays than any other day of the week. Not to mention how glorified the day is: TGIF, Fura-hi-day, where are we hooking up-day, T oa mpango-day, Kanywaji wapi-day... (well actually I made up the last three, but you get the point?) I have

an idea, what if we treated each day of the week as a Friday and not rush through the rest of the week in anticipation for Friday then we would have been saying TGIM/T/W/T..?

I recently attended a Youth Empowerment conference in the City. The highlight of the conference was a keynote speech by a Guest Speaker. As usual, in such youth empowerment fora, they call in some of these old grey haired chaps to come stir young minds to "action". The guy as anticipated went on and on about ..oooh its time the youth take over ..., it's your time, ...you are the future...blah..blah..yawn..heard it before! But just as I was about to doze off, I heard the old man refer to "us" as the "Microwave Generation"..!

He went on to explain that the youth want things done in microwave speed. They have no time to appreciate the details of history and reason: reading in between the lines and the footnotes that go with the subject matter. For once, I concurred.

A Makonde always looks for an easy way out. Everywhere you look in the society you will find a Makonde. Be it the matatu driver who throws caution to the wind and dangerously swaves onto the pavement to avoid the traffic jam, to the traffic policeman at the traffic lights waiting for a handout to a lady who put on weaves because their hair is whack.

I do believe patience is a virtue: but with the Makonde phenomenon clawing in every day, it seems like it's going the dinosaur way. I can testify that surely good things come to those who wait in patience, reverence and humbleness. Life is compounded with ups and down and nothing comes easy. The best things in life are the ones you enjoy once you have struggled for them.

*By Kenyan Scribe*

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Director: **Prof. Reuben O. Marwanga**  
**SCHOOL OF MECHANICAL AND PROCESS ENGINEERING**  
Department of Aerospace and Aviation Engineering  
Department of Chemical and Petroleum Engineering  
Department of Industrial and Manufacturing Engineering  
Mechanical and Mechatronic Engineering



Director: **Prof. Gordon O. Wayumba**  
**SCHOOL OF SURVEYING AND GEOSPATIAL SCIENCES**  
Department of Geodetic Science and Navigation  
Department of Geoinformation and Earth Observation  
Department of Land Administration and Information  
Department of Surveying Science and Technology

## FACULTY OF APPLIED SCIENCES AND TECHNOLOGY



Director: **Prof. Dorcas Yole**  
**SCHOOL OF BIOLOGICAL AND LIFE SCIENCES**  
Department of Applied and Technical Biology  
Department of Biochemistry and Biotechnology  
Department of Ecology and Conservation Biology  
Department of Food Science and Technology



Director: **Prof. Patrick J. Ogao**  
**SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGIES**  
Department of Computer Science and Technology  
Department of Information Systems and Technology  
Department of Computational Science and Technology



Director: **Prof. Alfred Orina**  
**SCHOOL OF HEALTH SCIENCES AND TECHNOLOGY**  
Department of Biomedical Sciences and Technology  
Department of Community and Public Health  
Department of Human Nutrition and Dietetics  
Department of Pharmaceutical Sciences and Technology



Director: **Prof. Thomas Onyango**  
**SCHOOL OF MATHEMATICS AND ACTUARIAL SCIENCES**  
Department of Pure and Applied Mathematics  
Department of Industrial and Engineering Mathematics  
Department of Statistics and Actuarial Science



Director: **Prof. Paul Baki**  
**SCHOOL OF PHYSICAL SCIENCES AND TECHNOLOGY**  
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Department of Geography and Earth Science  
Department of Materials Science and Technology  
Department of Physics and Space Science

## FACULTY OF SOCIAL SCIENCES AND TECHNOLOGY



Director: **Dr. Eljjoy Micheni**  
**SCHOOL OF BUSINESS AND MANAGEMENT STUDIES**  
Department of Accounting and Finance  
Department of Business Administration and Management  
Department of Entrepreneurship and Technology Management  
Department of Management and Business Systems



Director: **Prof. Odoch Pido**  
**SCHOOL OF CREATIVE ARTS AND TECHNOLOGIES**  
Department of Design and Creative Media  
Department of Music and Performing Arts  
Department of Fashion and Textile Technology  
Department of Printing and Media Technology



Director: **Prof. Richard Makopondo**  
**SCHOOL OF HOSPITALITY AND TOURISM STUDIES**  
Department of Event and Leisure Management  
Department of Hospitality and Institutional Management  
Department of Tourism and Travel Management



Director: **Prof. Peter Matu**  
**SCHOOL OF INFORMATION AND COMMUNICATION STUDIES**  
Department of Information and Knowledge Management  
Department of Journalism and Media Studies  
Department of Language and Communication Studies



Director: **Dr. Benson Ateng**  
**SCHOOL OF SOCIAL AND DEVELOPMENT STUDIES**  
Department of Criminology and Legal Studies  
Department of Economics and Resource Management  
Department of Governance and Public Policy  
Department of Human and Social Development

# TU-K ACADEMIC PROGRAMMES

## MASTERS DEGREE COURSES

Master of Science in Applied Statistics  
Master of Science in Mathematical Statistics  
Master of Science in Mathematics (Pure or Applied Mathematics)  
Master of Technology in Applied Parasitology  
Master of Science in Forensic Biochemistry  
Master of Philosophy in Applied Parasitology  
Master of Science in Applied Parasitology  
Masters of Technology in Environmental Resource Management  
Master of Technology (Mechanical Engineering)  
Master of Arts in Entrepreneurship  
Master of Business Administration  
Master of Applied Linguistics  
Masters of Science in Information and Knowledge Management  
Masters of Science in International Relations  
Master of Music in Music Education or African Music Studies  
Master of Musical Arts in Composition or Performance

## BACHELOR'S DEGREE COURSES

Bachelor of Technology (Quantity Surveying)  
Bachelor of Technology (Construction Management)  
Bachelor of Technology (Building Construction)  
Bachelor of Real Estate  
Bachelor of Real Estate  
Bachelor of Quantity Surveying  
Bachelor of Philosophy in:  
• Geoinformation Technology  
• Surveying Technology  
Bachelor of Engineering in Geospatial Engineering  
Bachelor of Applied Science in Geo-Informatics  
Bachelor of Technology:  
• Geoinformation Technology  
• Surveying Technology  
Bachelor of Science Land Administration  
Bachelor of Engineering in Electrical and Electronic Engineering  
Bachelor of Technology in Electrical and Electronic Engineering Technology  
Bachelor of Technology in Electrical and Electronic Engineering Technology  
Bachelor of Engineering-Civil Engineering  
Bachelor of Technology-Civil Engineering  
Bachelor of Engineering in Aeronautical Engineering  
Bachelor of Engineering (Chemical Engineering)  
Bachelor of Technology in Chemical Engineering  
Bachelor of Engineering in Mechanical Engineering  
Bachelor of Technology in Mechanical Engineering Technology  
Bachelor of Philosophy in Technology (Applied Statistics)  
Bachelor of Science in Mathematics  
Bachelor of Technology in Applied Statistics  
Bachelor of Technology In: (Options)  
• Computer Technology  
• Information Technology  
• Communication and Computer Networks  
Bachelor of Technology In: (Options)  
• Computer Technology  
• Information Technology  
• Communication and Computer Networks.  
Bachelor of Technology in Applied Chemistry (Industrial Chemistry)  
Bachelor of Philosophy in Technology in Applied Chemistry (**Analytical Option**)  
Bachelor of Technology in Environmental Resource Management  
Bachelor of Technology in Environmental Science  
Bachelor of Technology: Technical and Applied Physics  
Bachelor of Philosophy In:  
• Applied Biology  
• Biotechnology (Industrial and Medical Options)  
• Food Science & Technology  
Bachelor of Technology In:  
• Applied Biology  
• Biotechnology (Industrial and Medical Options)  
• Food Science and Technology  
Bachelor of Technology In:

- Applied Biology
- Biotechnology (Industrial and Medical)
- Food Science and Technology
- Ecology and Biodiversity Conservation
- Environmental Biology
- Wildlife Conservation and Management

Bachelor of Science in Biochemistry  
Bachelor of Technology in Community and Public Health  
Bachelor of Technology in Community and Public Health  
Bachelor of Philosophy in Medical Laboratory Technology  
Bachelor of Technology in Medical Laboratory Technology  
Bachelor of Science (Nutrition and Dietetics)  
Bachelor of Technology in Nutrition and Dietetics  
Bachelor of Science in Medical Laboratory Science  
Bachelor of Commerce (Options):

- Accounting
- Finance
- Business Management
- Human Resource Management
- Marketing Management
- Logistics and Supply Chain Management
- Entrepreneurship
- Insurance
- Procurement and Supplies Mgt.
- Information Systems
- Operations Management

Bachelor of Business Commerce  
Bachelor of Science in Accountancy  
Bachelor of Science in Accountancy  
Bachelor of Technology (Business Information Technology)  
Bachelor of Technology (Business Information Technology)  
Bachelor of Technology in Office Administration and Technology  
Bachelor of Technology in Office Administration and Technology  
Bachelor of Science in Information Science  
Bachelor of Technology in Information Studies  
Bachelor of Technology in Journalism and Mass Communication  
Bachelor of Technology in Journalism and Mass Communication  
Bachelor of Science Counseling Psychology  
Bachelor in International Relations and Diplomacy  
Bachelor in International Relations and Diplomacy  
Bachelor of Science in Disaster and Emergency Management  
Bachelor of Technology in Design  
Bachelor of Technology in Design  
Bachelor of Music  
Bachelor of Music  
Bachelor of Philosophy in Technology (Printing)  
Bachelor of Science in Hospitality Management  
Bachelor of Science in Tourism and Travel Management  
Bachelor of Technology in Tourism and Travel Management  
Bachelor of Technology in Hotel and Restaurant Management  
Bachelor of Technology in Institutional Catering and Accommodation Management  
Bachelor of Science in Event and Convention Management

## DIPLOMA COURSES

Diploma in Technology – Civil Engineering  
Diploma in Technology (Electrical and Electronic Engineering)  
Diploma in Technology:  
• Geoinformation Technology  
• Surveying Technology  
**Diploma in Technology (Mechanical Engineering – Options:**  
• Manufacturing Engineering  
• Industrial Plant and Energy Engineering  
• Automotive and Autotronic Engineering  
• Structural Fabrication and Metallurgical Engineering  
• Refrigeration and Air Conditioning Engineering:  
• Mechatronic Engineering  
Diploma in Technology Aeronautical Engineering  
Diploma in Technology (Real Estate)  
Diploma in Technology (Quantity Surveying)

# ACADEMIC PROGRAMMES

Diploma in Technology (Construction Management)
Diploma in Technology (Building Construction)
Diploma in Technology Architecture
Diploma in Technology: (Options)
• Applied Statistics
• Actuarial Science
Diploma in Environmental Resource Management
Diploma in Technology: Technical and Applied Physics
Diploma in Technology in Analytical Chemistry
Diploma in Technology in Industrial Chemistry
Diploma in Technology In: (Options)
• Computer Technology
• Information Technology
• Communication and Computer Networks
Diploma in Technology In:
• Industrial and Applied Biology
• Biotechnology
• Biochemistry
• Food Science and Technology
• Ecology and Conservation Biology
Diploma Medical Laboratory Science
Diploma in Pharmaceutical Technology
Diploma of Technology in Journalism and Mass Communication
Diploma in Technology in:
• Archives and Records Management
• Library and Information Technology
Diploma in Technology Nutrition and Dietetics
Diploma in Laboratory Technology
Diploma in Business Information Technology
Diploma in Entrepreneurship

Diploma in Business Studies Options:
• Business Administration
• Human Resource Management
• Sales and Marketing Management
• Procurement and Supply Chain Management
Diploma in Accountancy
Diploma in Office Administration:
• Legal Secretarial
• Medical Secretarial
• Business Secretarial
• Foreign Language Secretarial
Diploma in Community and Public Health
Diploma in Technology in Health Records and Information Technology
Diploma in International Relations and Diplomacy
Diploma in Disaster Management
Diploma in Legal Studies
Diploma in Criminology and Security Studies
Diploma in Social Work and Community Development
Diploma in Counseling Psychology
Diploma in Technology in Event and Convention Management
Diploma in Technology (Dip-Tech) in Hotel and Restaurant Management
Diploma in Technology (Dip-Tech) in Institutional Catering and Accommodation Management
Diploma in Housekeeping and Front Office Management
Diploma of Technology in Tourism and Travel Management
Diploma in Technology in Printing
Diploma in Technology (Fashion Design)
Diploma in Music
Diploma in Technology in Design



Africa Tech 2016 participant in the Engineering workshop at TU-K



**The Technical University of Kenya**  
*Education and Training for the Real World*

**Contact Details**

P.O. Box 52428 - 00200, Nairobi-Kenya.

**Tel:** +254(020) 3341639/3343672/2249974/2219929/2216136

**Cell:** +254 732 388765

**Web:** [www.tukenya.ac.ke](http://www.tukenya.ac.ke)

**Email:** [vc@tukenya.ac.ke](mailto:vc@tukenya.ac.ke)

**Facebook:** Technical University of Kenya

**Twitter:** @TU\_kenya