Dedan Kimathi University of Technology

Dedan Kimathi University of Technology

7th Graduation Souvenir Magazine





First year registration at DeKUT



DeKUT Charity Golf Tournament



DeKUT students in a lab session



DeKUT open day

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

Cover Picture:

H.E. Thabo Mbeki, C.S Dr. Fred Matiang'i, Prof. Eng. P.N. Kioni with other dignitaries during the 6th Graduation Ceremony

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VICE CHANCELLOR'S MESSAGE



Prof. Eng. P .N. Kioni
Vice Chancellor

Welcome to the 7th graduation ceremony souvenir magazine of Dedan Kimathi University of Technology. This is a momentous occasion to all the University stakeholders and most especially the graduating class of the year 2018. We will confer 1527 degrees and awards to our dear graduands. We are realizing our vision, to be "a premier technological University excelling in quality education, research and technology transfer for national development." And our mission, "To provide academically stimulating, culturally diverse and quality learning environment that fosters research, innovation and technology development towards producing relevant technical and managerial human resource and leaders to contribute to attainment of national development goals."

The University has experienced a lot of growth in various ways. New collaborations have been acquired in numerous areas: We are working closely with Siemens AG-Germany by offering a Siemens Mechatronics System Certification Programme which is one of the courses being offered that is available to engineers registered under Engineers Board of Kenya (EBK) as part of continuous professional development. This has contributed to the training of the much needed high level human resource required in the engineering sector since we are the first University in Africa with a Siemens Training Centre.

The University is evolving its uniqueness, through education, research, and technology transfer, to meet the technological needs of the Kenya Vision 2030. To successfully achieve this; we are seeking to contribute towards the government's big four which include Manufacturing, Universal Healthcare, Affordable Housing and Food Security.

In terms of providing Universal Healthcare, the University is working closely with the Ministry of Health towards the plans for constructing a Cancer Hospital in the University that will not only serve the nation but will also serve as a fully equipped training centre. Further, plans of the construction of the Science and Technology Park are underway and in fact, just recently, we signed up our anchor client. The Science Park's main aim will be to increase the wealth of our community by promoting the culture of innovation and the competitiveness of associated businesses and knowledge-based institutions.

The University is evolving its uniqueness, through education, research, and technology transfer, to meet the technological needs of the Kenya Vision 2030.

In line with providing quality learning to our students, late in the year 2017, the Commission of University Education (CUE), visited the University for recertification to ensure that our institution continues to provide the required quality and standards of education. I am pleased to state that the University was recertified with commendation. We are also benchmarking internationally so that the education and research programmes are relevant to the national needs.

Congratulations to the graduands. It is our hope that you will have a positive and lasting impact on the society you will be serving. Do not just look at the possibility of employment in the public or private sphere, but rather, seek alternative ways of engaging yourselves fully through innovation and entrepreneurship. I want to encourage you to join the Alumni Association and seek to make significant contributions to your Alma Mater.

DEKUT HIGHLY RANKED DURING THE 2017 CENTRAL KENYA ASK SHOW



The University participated in the Central Kenya ASK Show held from 12th – 16th September, 2017 at Kabiruini Showground in Nyeri. The theme of the show was '*Promoting Innovation and Technology in Agriculture and Trade*'. The trade fair was officially opened by the President, H.E Uhuru Kenyatta on Thursday, 14th September, 2017. DeKUT exhibited technological innovations and research outputs and had an opportunity for face to face interaction with key stakeholders.

The University was honored to have the President of the Republic of Kenya, H.E Uhuru Kenyatta accompanied by other dignitaries tour its main stand at the showground on Thursday, 14th September, 2017. The University Management Board led by the Vice Chancellor, Prof. Eng. P. Ndirangu Kioni was at hand to welcome the President. Staff and students were keen in show casing their innovative projects to the President who jovially interacted with them. The President, was impressed by the students' projects and DeKUT's effort towards promoting Research, Innovation and Technology Transfer.

DeKUT participated in trade classes' competition and won various prizes for different categories of awards. The University was ranked second position under the 'Best University Stand' and first position under the following categories;

- Best stand in research and development
- Breed champion (mature cow)
- Junior champion (Heifer 1-2 years)

The University was awarded three trophies, certificates and cash award for the various categories of classes it emerged a winner.

The University sponsored a luncheon for the key guests attending the closing ceremony at the ASK Show on Saturday, 16th September, 2017. DeKUT's Institute of Tourism and Hospitality Management (IToHM) staff and students provided catering services to over 200 invited guests. DeKUT's Students' Choir, the Travelling Theatre, the Soccer Team and Softball Team entertained guests through sports and music at the ASK Show arena on different dates. These student teams were organized through the University's Directorate of Student Welfare.

Prof. Eng. P. Ndirangu Kioni, DeKUT Vice Chancellor, was the Chief Guest during the luncheon where he officially closed the 2017 Central Kenya ASK Show.

By Irene Mwangi, RTMCL










DeKUT staff and students showcasing innovative projects to H.E Uhuru Kenyatta

WHAT QUALIFICATION FOR CERTIFICATION UNDER THE NEW ISO STANDARD SIGNIFY - QUALITY MANAGEMENT SYSTEM ISO-9001:2008 TO ISO 9001:2015

Dedan Kimathi University of Technology was initially ISO certified on 23rd February 2011 as Kimathi University College of Technology(KUCT) for a period of 3 years. The college was chartered as a fully fledged public University on 14th December 2012. It therefore meant that documentation in terms of the Quality Manual, Procedures Manual and Work Instructions had to be reviewed to reflect the new status. The University members of staff underwent an intensive period of training in order to acquire skills in revision of documents and internal quality auditing in readiness for recertification. The recertification audits were conducted between 4th June and 6th June 2014. DeKUT was found to have complied with the requirements of ISO 9001:2008 Standard and adherence to statutory regulations and was recommended for recertification. The University was re-certified for a further 3 years period until June 2017. The University is now in the process of preparing to be certified under the new standard ISO 9001:2015.

Qualification for certification under the new standard means that the University has the capability and capacity to continually improve and offer quality and globally accepted services and products to its customers and other stakeholders. The interpretation of this is that the curriculum and teaching methods of all the University programmes undergo a series of vetting and quality assurance evaluation before they are delivered to our customers - our students. Monitoring and Evaluation of teaching is carried out every semester to ensure continual improvement; this involves the students evaluating their lecturers in various parameters including availability beyond the normal teaching times for consultation and mentoring.

Dedan Kimathi University of Technology's core functions are Provision of Quality Educational, Research and Community Linkage. The University processes of admission, registration, teaching and examination are geared towards meeting best practices in terms of quality and efficiency.

TRANSITION TRAINING

The university held 5 day awareness training form 5th to 9th February 2018 for its members of staff in preparation for the transition from the ISO 9001:2008 to ISO 9001:2015 Standard.

Training for top management was held on Monday, 5th February 2018. It was followed by awareness training of all administrative staff on 6th February 2018.

The training culminated in the training of internal quality auditors from 7th to 9th February 2018. This group of trainees was required to have applied for the training in advance. A total of 40 members of staff from both academic and administrative divisions applied and were trained.

The training focused mainly on the requirements and changes in the new standard. The training offered insights on what is a quality management system in a university setting and how to:

- Contextualize the university
- Importance of leadership in successfully implementing the new standard
- Identify risks and opportunities for the university
- Identify the university stakeholders and meet their requirements
- Develop quality objectives in line with the university's strategic direction
- Improve on the various university processes
- How to internally audit the university
- Continual improvement and innovation

The next step will be to review the university's documentation for all the departments to align them with the new standard followed by a thorough internal audit in preparation for certification.

The training was organized and coordinated by the Directorate of Quality Assurance in conjunction with the Human Resource department.

The training was officially closed by the Deputy Vice-Chancellor, Administration and Finance who is also the Chairman of the ISO Transition Committee.

"Be a yardstick of quality. Some people aren't used to an environment where excellence is expected."
~Steve Jobs

By John Kiarie, QMS Management Representative

DeKUT HOLDS ITS 3RD INTERNATIONAL CONFERENCE ON SCIENCE, TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP



The University held its 3rd DeKUT International Conference on Science, Technology Innovation and Entrepreneurship (STI&E) on 1st – 3rd November, 2017 at its Main Campus. The theme of the conference was '*Harnessing Science, Technology, Innovation and Entrepreneurship for Sustainable Development*'. The 1st DeKUT International Conference on STI&E was held in November, 2014.

The conference provided researchers from local and international institutions a forum to discuss and share ideas on latest innovations and research outputs that address local and global challenges and those that improve the quality of life for the people and inform the decision-making process in matters of development by government and businesses.

The conference sub themes were as outlined below:

1. Basic and Applied Sciences for Advancement of Research and Innovations
2. Business Management and Entrepreneurship for Sustainable Development.
3. Engineering Technologies and Innovations for Industrialization.
4. Health Sciences and Community Development
5. Information and Communication Technology for Development.
6. Innovative Agricultural Sciences and Technologies for Sustainable Food Production and Food Security.
7. Trends in Technical Education and Training.
8. Water, Energy, GIS and Remote Sensing, Environment, and Climate Change.

The conference was officially opened by the then Governor of Nyeri County, His Excellency, late Dr. Wahome Gakuru. Dr. Gakuru was a great friend and partner of Dedan Kimathi University of Technology for many years. Over the years he had offered immense support, knowledge and intellect that focused on growth and development of the University.

The conference drew its delegates from Kenya and abroad. International delegates came from countries such as Germany, Japan, Ethiopia, Mozambique and Rwanda. Notable was the presence of Professor Michael Herzog (Technical University of Applied Science-, Wildau, Germany) and Professor Minoru Sasaki (Gifu University, Japan) who have attended all DeKUT's International conferences on STI&E since year 2014. The conference attracted seventy (70) delegates who were affiliated to more than twenty five (25) institutions of higher learning and research. Sixty six (66) papers were presented during this conference.

Invited guests who graced the 3rd DeKUT International Conference on STI&E include the then Governor of Nyeri County, His Excellency late Dr. Wahome Gakuru; Eng. Paul Tanui, CEO, Konza Technopolis Development Authority; Mr. Masahiro Shiota, CEO Hardnut International and Dr. Rosebela Owuor from National Research Fund

The 4th DeKUT International Conference on STI&E will be held on 7th – 9th November, 2018 at DeKUT Main Campus, Nyeri.

By Irene Mwangi
RTMCL



Top left: H.E Dr. Wahome Gakuru – The Late Governor, Nyeri County

Top right: Eng. Paul Tanui – CEO, Konza Technopolis

Bottom left: Prof. Ndirangu Kioni, Vice Chancellor, DeKUT

Bottom right: Prof. Paul Wambua, Deputy Vice Chancellor, RTMCL

COLLABORATION BETWEEN DEKUT AND NATIONAL TSING HUA UNIVERSITY (TAIWAN) ON STAFF EXCHANGE PROGRAMME AND ICT EDUCATION PROGRAM IN NYERI



Dr.Owaga, TAISA volunteers and DeHUB students at Karangia Secondary School



Karangia Secondary School Computer lab after installation of LAN networking by TAISA volunteers and DeHUB group

DeKUT's goal on internalization has been realized through various engagements with International Universities with respect to sharing of knowledge and technology towards resolution of global and societal challenges. In 2014, DeKUT signed an MoU with National Tsing Hua University (NTHU) towards several objectives including staff/student exchange programmes. Dr. Eddy Owaga was appointed as the MoU champion to spearhead collaboration activities. One staff – lab technologist has benefitted from the MoU arrangement by visiting NTHU and conducting research using advanced analytical equipments as part of his MSc. thesis.

Through DeHUB, DeKUT has also collaborated with NTHU - through Taiwan-Africa International Service Association (TAISA) on community service ICT education program within Nyeri County. TAISA is a NGO based in Taiwan whose aim is to enhance the quality of education and provide better healthcare for African Communities. Founded in 2009, TAISA has been sending student volunteer groups from NTHU to African countries annually for a decade. The footprints of TAISA volunteers have reached Kenya, Tanzania, Ghana and Sierra Leone, collaborating with schools, universities and churches. TAISA Kenya volunteer group specialized in ICT education. Their mission is to set up sustainable computer labs for schools in need and provide better education through ICT. We believe that it is everyone's right to gain access to modern technology and the information network.

Each year, student volunteers from National Tsing Hua University, Taiwan NTHU) ship computers to Kenya and set up computer labs for schools in Kenya. TAISA's first visit to Nyeri County was in 2014, a survey group was sent to visit local schools searching for partnerships. By the end of 2017, TAISA group built four computer labs for St.Anne' Primary School, Ihithe Secondary School, Karangia Secondary School and Dr. Kamundia Secondary School. In 2017, TAISA program in Nyeri County involved new partners from Dedan Kimathi University of Technology: DeHUB student club. A joint program between TAISA and DeHUB was launched, aiming to construct local area network (LAN) for Karangia Secondary, the school that received a computer lab from TAISA in 2015. The joint program is a huge step forward, the involvement of local volunteers is the important factor to measure the impact of TAISA program in Nyeri County. Apart from computer lab set up program, the new joint program shall be the focus point of 2018 TAISA group.

By: Dr. Eddy Owaga

DeHUB, AN INNOVATORS SPACE AT DeKUT

Dedan Kimathi University of Technology Innovation and Incubation Centre (DeHUB) was founded in March 2015 by DeKUT. The incubation centre was established with the goal of inspiring innovation and entrepreneurship within and outside DeKUT community. To achieve this, DeHUB operates an Incubator to facilitate incubation of enterprise start-ups by providing them with physical, technical, business and networking services. In addition to the incubation program, DeHUB also plays host to numerous tech events with the aim of engendering a creative environment for the hub members who are now more than six hundred.

Some of the DeHUB 2017/2018 highlights:

DeHUB Kenya Hack 2017

The DeHUB Kenya Hack 2017 was held on 16th June to 18th June 2017 and was proudly hosted by DeHUB working closely with the Computer Society of Kimathi team. Different organizations, start-up companies and sponsors came together to reinforce the developing tech-ecosystem in and around Nyeri. The main sponsors of the event were Dedan Kimathi University of Technology, Andela and Africa's Talking.









GSMA representatives visit DeKUT

In the month of July 2017, GSMA representatives were excited to visit DeKUT and interact with young DeKUT innovators on the subject- innovation – and possible funding from GSMA. The students were grateful for the great insights from the team and the motivation this session brought about.

GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai, Mobile World Congress Americas and the Mobile 360 Series conferences.

DeKUT was the first African University that GSMA visited.



GSMA representative stressing a point during the visit

Central Kenya National Show - Nyeri

DeHUB presented six start-up companies at the Central Kenya National Show 2017, which was held at Kabiruini showground, Nyeri, from Wednesday 13th to Saturday 16th September. The projects exhibited by the start-up companies were key in enabling the University to win the best stand in Research and Development award, second best University stand and third best stand in interpretation of the show's theme.

The president, His Excellency Hon. Uhuru Kenyatta, was impressed by the students' projects and DeKUT's effort towards promoting Research, Innovation and Technology Transfer when he graced the Show. Of key interest to him was the Usalama Watch App; i-monitor whose team he invited to state house for a presentation and Masomo Bora App which he referred to the Ministry of Education.



President Uhuru Kenyatta interacts with DeHUB team at the showground. Looking on is the Vice Chancellor DeKUT and the then Cabinest Secretary, Ministry of Agriculture, Hon. Willy Bett

Election of DeKUT Chancellor

The Dedan Kimathi University of Technology Alumni Association (DeKUTAA) members had a privilege of participating in voting for their three (3) preferred nominees to the position of the DeKUT Chancellor for the next five years. The exercise took place on Friday 6th April, 2018 from 0600hrs through 1800hrs (UT+3.00) in line with the legal provisions on the chancellor selection process. However, the exercise was unique in that it was entirely conducted online. This gave registered and active DeKUT alumni members spread across the globe a chance to cast their votes in line with the procedure stipulated in the University statutes for appointment of the Chancellor.

One of the pioneering start-up companies incubated in DeHUB during the inaugural year, 2015, SoftBallot Ltd, provided the voting platform. SoftBallot is an award winning Software and Electronic Start-up Company that provides advanced online and off site voting solutions.



Some of the SoftBallot Team members Participating in PIVOT East completion in 2015 – a pitching competition



SoftBallot Team working in DeHUB

The voting portal was accessible during the material day for the stipulated voting duration to the eligible members. The portal was fully customized to comply with the requirements provided by the University Senate, which is the body mandated to steer the process of appointing the Chancellor. Upon providing their authentic login credentials through the portal, members were presented with the list of the candidates and their profiles. The system allowed the voters to rank their three preferred candidates in three steps from the first to the third choice. Once the scheduled voting period elapsed, the portal was automatically closed and results from the exercise displayed on the portal immediately.

DeHUB continues to be at the forefront of fostering team-based innovative and entrepreneurial activities among DeKUT students, faculty, alumni and the community at large. DeHUB remains steadfast in keeping pace with the innovative world as well as setting new trends to be emulated. We look to the future with clear-eyed confidence and heartfelt determination at this extraordinary point in the arc of history.

As we celebrate the seventh graduation ceremony, I congratulate all the graduands, on behalf of the DeHUB team, and wish them innovative and enterprising careers ahead.

By Mr. Augustus Kamau, Coordinator, DeHUB

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY SIEMENS TRAINING CENTRE IS NOW ACCREDITED BY THE ENGINEERS BOARD OF KENYA (EBK).

In November 2016, Dedan Kimathi University of Technology (DeKUT) in collaboration with Siemens AG (Germany) established the 1st Siemens Training Center – DeKUT Siemens Training Centre (DeSTC) - in Africa for Siemens Mechatronic systems Certification program (SMSCP) at DeKUT. Since inception, the Centre has certified 75 professionals (60 and 15 in SMSCP level 1 and Level II respectively) and currently there are 56 trainees in class in different levels. The program has also continued to attract professionals from the local Industries and Universities.

In December 2017, DeSTC received a donation in kind of Siemens modern industrial equipment (PLC's - S7- 1200, HMI, Simatic S7 Professional V14 SP1 etc.), from Siemens Automation factory (South Africa) which combined with the already existing training facilities puts the Centre in the same level as other Siemens Training Centres in the world.

The establishment of the centre was inspired by the University's continuous effort to equip students with relevant industrial skills for the job market and quality training to contribute to the attainment of national development. Recently, the centre was accredited by Engineers Board of Kenya (EBK) to offer Siemens Mechatronics Systems Certification Program as a Continuous Professional Development (CPD) Course for Registered Professional Engineers and Engineering Consulting Firms; to develop manpower with the capacity, knowledge, desire and ability to address the critical technical issues associated with energy, manufacturing, agriculture, heath and the environment.

Contact:
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KENGEN Engineers sitting for Siemens Certification Examination in September 2017



PLC's - S7- 1200, HMI, Simatic S7 Professional V14 SP1



DeKUT Siemens Training Centre (DeSTC) receives a donation from Siemens AG

ABOUT SIEMENS MECHATRONIC SYSTEMS CERTIFICATE PROGRAM (SMSCP)



My name is Nicholas Njuguna Kamau. I am among the first students to complete the Siemens Mechatronic Systems Certification Program (SMSCP), first of its kind in East Africa and Africa, offered only in Dedan Kimathi University of Technology. It has been a privilege for me because SMSCP is exactly what any budding or certified technician or engineer requires to be up-to- date with the dynamic integrated mechatronic systems in our world today.

SMSCP is spread out over three levels: level I, II and III. Upon meeting the qualification requirements, one can enroll for level I, and with successful completion he or she may choose to proceed with the subsequent levels. The first level is a comprehensive introductory stage. The students are taught four courses covering basic components of a mechatronic system, namely the electrical, mechanical, pneumatic and digital components. Teaching is through lectures, personal studies of the provided notes and practical learning at the adequately accessible Amatrol and Siemens mechatronic modules that work under the same principles as any mechatronic modules in our industries today. During every course in the level, the certified instructor provides notes with accompanying questions. As soon as a course and its questions are complete, answers are duly provided. This enables students to regularly assess themselves and to monitor their performance. At the end of the level a thorough online exam set by Siemens AG is taken by the students, with its results determining whether each has passed or failed based on the defined performance threshold. The students that pass then become legible Siemens Certified Mechatronic Systems Assistants. They can comfortably be employed to monitor complex mechatronic systems to ensure effective operation and minimum down-times.

SMSCP is the bridge between theory and industry. It is the mind-opener that enables one to see technology not only for what it is but also for all that it can be.

The second level delves deeper into the concepts of mechatronic system. It is during this course that students get into the details of process control technologies, automation systems and how to program them using relevant software, motor control, machine elements and manufacturing processes. This level is divided into six courses and taught through lectures, quizzes and interactive learning whereby students use the available PLC modules and the TIA Portal software or the Simatic Manager software to create their own programs and projects under proper supervision. Similar to the first level, SMSCP level II is completed by sitting for and passing a thorough online exam set by Siemens AG. Upon completion, one then becomes a Siemens Certified Mechatronic Systems Associate, rendering him or her capable of managing, investigating, trouble-shooting and repairing mechatronic systems for operational efficiency, cost and process control.

SMSCP Level 3 is the final level of the program. It is a level that stresses heavily on hands-on project management rather than lectures. This level requires each student to use all the knowledge they have acquired to develop their own mechatronic system project, and just like the previous levels, a certificate is awarded upon passing of the SMSCP level 3 exam, rendering all successful candidates Siemens Certified Mechatronic Systems Professionals. This means that they are equipped with adequate skills in project management, process management, quality assurance and the ability to design or redesign systems to best meet user requirements.

SMSCP is the bridge between theory and industry. It is the mind-opener that enables one to see technology not only for what it is but also for all that it can be. For that, my fellow Siemens Certified Mechatronic Professionals and I are very grateful to DeKUT for the opportunity we have had to undertake the program. It's value is without a doubt tremendous.

Nicholas Njuguna,
Mechatronics Engineering Graduate – DeKUT
Siemens Certified Mechatronic Systems Professional

DeKUT'S COLLABORATION WITH TH-Wildau, GERMANY GOES A NOTCH HIGHER

When the BRIDG-IT project, funded by DAAD Germany, was launched in 2013 in Technical University of Applied Sciences -Wildau (TH-Wildau), Germany, little did the two Universities know that the project will yield great results in exchange and knowledge transfer. Four years down the line, the project has surpassed initial expectations and stands-out as a good example of a successful collaboration. Over the last 4 years, a lot of activities have taken place among them; staff and students exchange, joint research project; industrial visits both in Kenya and Germany and Technology transfer under the coordination of Prof. Michael Herzog (TH-Wildau) and Prof. Peter Muchiri (DeKUT). The signing of the commencement of the project titled was officiated by the President of TUAS, Prof. Laszlo Ungvari and his counterpart in DeKUT, Prof. Ndirangu Kioni and witnessed by the Kenyan Ambassador in Germany.



Signing of MOU in Berlin Germany between DeKUT Vice Chancellor, TUAS President and witnessed by the Kenyan Ambassador in Germany.



The Chancellor of DeKUT, Prof. Shellemiah Keya with DeKUT Vice Chancellor, Prof. P.N.Kioni and Prof. Michael Herzog of TUAS- Wildau, Germany during DeKUT international conference

Among the key achievement of the collaboration are:

1. Staff Exchange

Each year, 4 Professors in DeKUT visit TUAS for academic experiences from the Departments of Mechanical Engineering, Mechatronics Engineering and Coffee Technology. So far 12 (10 Professors and 2 scientists) from DeKUT have visited TUAS Wildau for the said purpose. Among the key activities undertaken by DeKUT staff is visit of departments, research supervision and giving lecturers. On the other hand, staff from TUAS-WILDAU has been visiting DeKUT for lectures to the post graduate students and research supervision. So far, 12 (10 Professors and 2 scientists) from TUAS-WILDAU have visited DeKUT. Further there has been one visit from the President of TUAS and Vice Chancellor of DeKUT to the respective institutions.



A delegation of TH-Wildau Professors, makes a courtesy visit to DeKUT Vice Chancellor, Prof. Kioni during their visit to DeKUT in September 2017



The President of TUAS-Wildau, Prof. Ungvari and Prof. Herzog (TUAS program coordinator), welcoming DeKUT's Deputy Vice Chancellor, Prof. Muthakia and Prof. Muchiri (DeKUT program coordinator) to Wildau, Germany for the collaboration visit

2. Student Exchange

Students from the two institutions have benefitted from studies and research work from this exchange, in addition to experience of international culture in the respective countries. So far 9 students exchanges from TUAS-WILDAU to DeKUT has taken place. A TH-Wildau student completed a 5 month Bachelors Thesis work in July 2016 and industrial attachment in Geothermal energy exploration, which is a special experience for a German student.

On the other hand, 12 students from DeKUT have carried their research work in TH-Wildau. This comprises of 3 Doctoral students and 4 Masters students. Currently, 2 Masters students and one PhD students are doing their research work at TH-Wildau. In addition, DeKUT has sent 3 scientists to TH - Wildau while TH-Wildau has sent 3 scientists to Kenya for one month exchange. The experience in Germany has been very good both in the academic work and the working culture in Germany. On the other hand, German students and staff have had experiences in Kenya that are not available in the home country like Geothermal Technology, Coffee Technology and climbing of Mt. Kenya.





DeKUT Staff, Mr. Tanui and Mr. Hassan researching on the Moving Electron Microscope for Material Engineering in their PhD program. Looking on is Prof. Peter Muchiri of DeKUT and staff from TH-Wildau. DeKUT researcher, Ms Diana Njuguna in Prof. M. Frohme Labaratory in TH-Wildau



Prof. Peter Muchiri giving a Lecture at the University of Wildau, Germany

3. The Double Degree Program

The collaboration of DeKUT with TH-Wildau in Germany went a notch higher with the development and launching of a Double Degree program in M.Sc. in Mechanical Engineering. A delegation of DeKUT, led by the Deputy Vice Chancellor, Academic Affairs, Prof. Gerald Muthakia visited Germany to negotiate and sign the Double Degree program contract. The contract involves exchange of students from DeKUT to Germany and vice versa for a Semester in both Universities to facilitate knowledge & technology transfer between Kenya and Germany and leverage on unique training and research resources in the respective Universities for improvement of training and research output at Post Graduate level.

So far, DeKUT has trained 3 groups in TUAS under this program. The first pioneer exchange students from DeKUT reported in TUAS- Germany in March, 2017 and finished their summer Semester in July 2017. The first TUAS students in the program reported to DeKUT in mid July 2017 to end of September. The training and research is jointly coordinated by both DeKUT and Germany Professors. The Project is funded by "Deutscher Akademischer Austausch Dienst" (DAAD).



Discussion and signing of the M. Sc Mechanical Engineering Double Degree Contract at TUAS, Wildau-Germany on Tuesday 16th May, 2017.



The President of TUAS-Wildau, Prof. Ungvari with the DeKUT exchange students in TUAS, Germany, during the international students presentation. In attendance is the DVC-AA, Prof. Muthakia and Prof. Peter Muchiri of DeKUT

4. Industrial Projects And Visits

Key to the project is transfer of Technology between the two institutions. This is accomplished through industrial visits and industrial related projects. The German students have benefited from new experience of Coffee Technology - from the farm to the cup. Further, the Geothermal Energy Technology has been very interesting to German students, with visits to Olkaria, Naivasha and Menengai in Nakuru through DeKUT collaboration with KENGEN and GDC respectively. In Germany, the DeKUT staff have visited companies dealing with renewal materials for boat making, energy generation plants from waste, jet engine maintenance, coffee processing among other companies. The exposure of industrial experiences to the staff and students has been quite enriching.

From such a successful collaboration, DeKUT can only get stronger in its quest to be a Premier University of Technology.







Industrial visits in Geothermal fields in Kenya (KenGen & GDC) and Jet Maintenance company in Berlin, Germany.

Prof. Peter N. Muchiri (PhD, Mechanical Eng. KU Leuven, Belgium)
Collaboration Coordinator,
School of Engineering, DeKUT

NUTRITION AND DIETETICS PROGRAMME AND DeKUT COLLABORATION WITH HARPER ADAMS UNIVERSITY (UK) ON INDIGENOUS LEAFY VEGETABLES RESEARCH AND INNOVATION



BSc. Nutrition and Dietetics students during a practical session in the laboratory

New programme launch at IFBT: B.Sc. Nutrition and Dietetics

In May 2017, Institute of Food Bioresources Technology (IFBT) was honoured to receive the first cohort of students pursuing B.Sc. degree in Nutrition and Dietetics. This was a moment of pride for us as a key accomplishment towards fulfilling the University's mandate on undertaking relevant training, research and technology transfer towards attainment of national development goals. The B.Sc. degree in Nutrition and Dietetics aims to strengthen the capacity of nutritionists and dietitians in research, innovation and technology in order to provide optimal preventive and curative nutrition services within community and clinical settings towards attainment of the Vision 2030 and beyond socioeconomic goals. Nutrition and Dietetics graduates are employed in the hospitals, government and non-government organizations, community based organizations, public health research, International and local organizations and community nutrition programmes.

In addition to the B.Sc. degree in Nutrition and Dietetics programme, the following programmes are also offered under IFBT: **M.Sc. degree in Food Science and Technology, B.Sc. degree in Food Science and Technology, Diploma in Food Science and Technology and Certificate / Diploma in Coffee Technology and Quality Management**. We offer comprehensive undergraduate and postgraduate programmes that prepare students for leadership positions in the food industry, academia, research, non-government agencies and government. Thus, our undergraduate and postgraduate programmes have experienced remarkable growth in recent years. Both undergraduate and postgraduate students are highly encouraged by motivated staff to undertake varied experiential learning opportunities. Postgraduate students conduct research on the novel topics aimed at improving the quality and nutrition of food.

DeKUT collaboration with Harper Adams University (UK) on Indigenous Leafy Vegetables research and innovation

In collaboration with Harper Adams University (UK), DeKUT through IFBT was successfully awarded grant for workshop on 'Improving food security and nutrition in Kenya: strengthening Indigenous Leafy Vegetables (ILV) research and innovation capacity'. Under the Researcher Links scheme offered within the Newton Utafiti Fund, the British Council and the Kenyan National Research Fund, DeKUT will host a four day workshop on the above theme in Nyeri, Kenya on 10th -13th September, 2018. The workshop is being coordinated by Dr. Eddy Owaga (IFBT, DeKUT) and Dr. Jim Monaghan (Harper Adams University-UK) and will have contributions from other leading researchers.

The main objective of the workshop is to strengthen institutional links and develop a new ILV research and innovation capacity based on cross-disciplinary information sharing, networking and partnerships with a focus on delivering improved food security and nutrition in Kenya. The specific objectives include: (i) Evaluation of current knowledge, skills and technological gaps in ILV value chain. Keynote presentations will summarise the current position in production, processing, value chain

and nutritional contribution of ILV, (ii) Developing research and innovation strategies for addressing critical knowledge, skills and technology gaps in ILV value chain, (iii) Strengthening strategic institutional partnerships and networking for an integrated research and innovation approach for improved contribution of ILV to food security and nutrition

The workshop will largely focus on improving Kenyan nutrition by enhancing the nutritional contribution of ILV to the local diet. ILVs are rich sources of micronutrients and beneficial non-nutrient bioactive compounds. However, the importance of ILVs as a dietary mitigation of micronutrient deficiencies has not been fully exploited, partly because of: (i) limited formal seed production and sourcing, (ii) poor seed quality; (iii) agronomic practices are mainly subsistence level without modernisation; (iv) high postharvest losses are experienced due to lack of appropriate processing and preservation methods; (v) limited awareness of ILVs nutrition and health effects; and (vi) lack of policy to develop the value chains

The multiple barriers to incorporating ILVs into a modern Kenyan diet require multi-disciplinary solutions to the skills and technological gaps along the whole ILV value chain.

This workshop will develop a new institutional link between Harper Adams University and DeKUT and also develop ILV research and innovation capacity. The workshop will contribute to the personal and professional development of researchers based at both institutions, not only those who attend the workshop but also through further dissemination within the institutions.

By Dr Eddy Owaga, Director, Institute of Food Bioresources Technology (IFBT)

DeKUT LIBRARY HAS COME A LONG WAY



"Not all readers are leaders but all leaders are readers", Harry Truman.

DeKUT Library has strived to build readers and leaders of substance based on the three pillars envisioned in our University's vision- Quality Education, Research and Technology Transfer. To promote research, the library over time has expanded its collection to include a rich collection of print and electronic materials. The library has subscribed access to over 200,000 e-resources which include the eBooks and e-journals. The print collection has expanded from around 2000 texts in the year 2009 to over 35,000 in 2018. However Modern libraries are dealing with the changing face of the academic students who are more technological savvy, who prefer the electronic based information to a physical visit to the library. DeKUT library is therefore actively providing library services to this kind of user(s); the library recently acquired a server that will enhance remote service delivery.

To expand further, the University is currently constructing a new library which will host at least one thousand four hundred users. The library's office area will also be expanded to accommodate more diverse sections.

DeKUT library staff members strive to always provide an environment that fosters a love for learning and reading by the way they deliver services. "We take this opportunity to congratulate the graduating class of 2018. It has been a great pleasure to serve you throughout your study period. **HONGERA"**

BY LYDIA MURIITHI
LIBRARY DEPARTMENT



RAISING A GENERATION OF MOVERS – THE SPIRIT OF DeKUT!

Chris Barsolai
Graduand – BSc. Telecommunication and Information Engineering; Intel Student Ambassador

There's an old saying that it takes a whole community to raise a child. Likewise, it takes a whole community to equip a student with the relevant skillset and prepare them for real-world industrial application of knowledge. Key to a successful career is quality education. No other place fits this narrative better than Dedan Kimathi University of Technology.

In my early days at the University, I met Ngesa Marvin, a friend and classmate who shifted my view of the technology ecosystem, taught me a lot about leadership, helped me develop technical skills and expanded my viewpoints on techie as well as develop a passion. Together with Ngesa, we ventured into a number of projects with the aim of empowering the society and raising a community of developers around DeKUT. We wanted to stir up a revolution, one that would change the University's tech community for the better and showcase DeKUT as a Premier Technological University in the country and beyond. Fast forward to the present, and we couldn't be more satisfied of our achievements over the years.

The Kenyan technological and industrial scene is poised for even greater and more exciting changes ahead. As such, DeKUT has always been focused on training students and equipping them with the necessary ability to develop skills and knowledge while having significant responsibility and high impact on society. Our collective success as a nation hinges on these skills, and its ability to be imparted on future generations. Through DeKUT's holistic and practical approach to studies and development, I was empowered to apply a 'hands on' approach to developing the world around me. Over the years, it has become even more evident how DeKUT enabled me to channel my skills and ingenuity into industry and research.

Support for the Tech Community

DeKUT is an award-winning institution and has always been home to some of the country's top innovations and an important source of engineering talent. Students have time and again emerged winners in top competitions in Kenya and globally, showcasing the university's ability and workmanship. DeKUT has been an integral part of our journey, and a pillar to the success of our projects.



Some of the tech team members with the coordinator DeHUB (middle) during a tech event

Leveraging a confluence of University resources, ranging from top-notch engineering machinery to software development expertise, my team and I have been able to confidently navigate a new world of techpreneurship - taking our concepts from idea to prototype and to the market. One of the key players attributed to DeKUT Tech community's expansion is Dedan Kimathi University of Technology Innovation and Incubation Centre (DeHUB). DeHUB works to support start-ups incubated at the centre to produce quality products, help the founders penetrate the market and equip them with skills and knowledge to remain relevant in the market.



DeKUT Open Day with the Vice Chancellor, Prof. P. N. Kioni and DeHUB Development Coordinator Ken Njihia

With our startup SoftBallot, we got incubated at DeHUB in 2015, giving us a platform to fully develop our idea, providing access to business advice, technical expertise & mentorship, and allowing cross-pollination of ideas from other student teams. SoftBallot made it to the finalist stage of the 2015 Pivot East Africa competitions, getting recognition for being the only team of university students in the finals and a chance to pitch to investors & venture capitalists from around the globe. Additionally, we got a chance to attend and showcase at the 2015 Global Entrepreneurship Summit officiated by the President of Kenya H.E Uhuru Kenyatta.

Within the same year, we developed Unicomm, a wearable sensor glove that detects hand gestures and translates sign language into words and audio. The project went ahead to take the 1st Place in the 2015 Lions of Science Awards Challenge.

All these achievements would never have been possible without the University's continued support in creating an enabling environment and availing resources whenever requested purposefully.

At DeKUT, I was fortunate enough to meet and work with a team of tech enthusiasts who equally have passion in technology as I do. Among them, quite notably, are: Ngesa Marvin (GDG Nairobi Co-Lead; Intel Student Ambassador), Barclay Koin (GDG Kimathi University Lead), Billy Rotich (Computer Society of Kimathi President 2016/17) and Kaberere Eve (Women Techmakers Lead 2016-17).



We believe that with the power of collective action, social networks and crowdsourcing, individual action is amplified to have extraordinary influence on the larger systems that surround us. It starts at the smallest scale—with one person determined to make something happen—and can grow like wildfire to the extent our imaginations deem possible. Hence at our local community based within and around DeKUT, we built Tech X - a legion of developers, self-learners, hackers, entrepreneurs - who have come together to develop the society through frequent meetups, holding events aimed at leveraging the skills of students, and projects that serve to solve civic African challenges. What defined the influence, scope and power behind this movement is its optimism in action—the belief in individuals' ability to enact change and then do it.

Community strengthens a university student's ambition and provides a lasting impact toward their growth.

Create Impact

The journey continues. Even as we leave, what DeKUT has infused in me over the years far outweighs any influence I could have gotten elsewhere. On this graduation date, I am proud to say DeKUT has made me who I am. Graduands, form up your serried ranks, muster the words you've taken four/five years to master and prepare to march out of those gates and build this nation in more ways than one. As graduates, you must keep your eyes on the prize. Class of 2018, as you'll find out, a DeKUT degree is something that stays with you the rest of your life, and as such each graduand should fly its flag high. Make it your heritage. Long live DeKUT!

Parting Quote: "The future belongs to those who learn more skills and combine them in creative ways" —Robert Greene, Mastery




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pay the person named in my advice the sum of
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SIGNATURE OF ISSUING OFFICER


CSOK
Computer Society of Kimathi

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY OFFERS INTERNATIONAL EXCHANGE PROGRAMMES IN COLLABORATION WITH IAESTE



Mr. Ngugi – our 2017 graduate, with his supervisor Prof. Reinhard Gerndt of Ostfalia University of Applied Sciences, Germany next to a humanoid robot that Mr. Ngugi was helping the University develop.

The International Association for the Exchange of Student for Technical Experience (IAESTE) is an international organization providing cutting edge work experience for students abroad through paid internships; Students take up internships for 8 weeks to 18 months.

IAESTE was started in 1948 at the Imperial College in London with an aim to promote better understanding between countries and cultures as well as enhance attainment of technical work experience. The association has more than 90 participating countries and exchanges over 7000 students annually giving them relevant experience in their area of specialization and broadening their global perspective. Currently, in Kenya, there are only 2 participating institutions:

1. Dedan Kimathi University of Technology
2. Jomo Kenyatta University of Agriculture and Technology



Professors Michael Ikua- our graduand 2018 worked with at Technical University of Dresden Electrical Engineering Department – Andreas Ahrens and Andre Sandmann

DeKUT values quality education and holistic molding of the students. In this regard, the University pursued incorporation into IAESTE and was successfully incorporated into the association in the year 2013. This opened up new opportunities for students to take up internships abroad and gain life-changing global experiences. It also allowed students from around the world to take up internships in Kenya - at DeKUT.

Since inception in DeKUT, IAESTE has sent and received students for international internships to and from countries such as Germany, United Kingdom, Austria, Czech Republic, Malta, Sweden, Ghana, Spain and India. The technical and cultural experiences that the students have gained during their stay in the various countries help in their social and cultural integration as well as in enhancing their professional skills out of the internship experience.

Out of the international exchange experience, DeKUT graduates have been able to secure jobs in prestigious companies such as Pricewaterhouse Coopers, General Motors among others. Others have been able to secure scholarships and admission to their masters programmes in foreign universities such as University of Rostock - Germany, Morgan State University - USA, Kyungpook National University in South Korea just to name a few.



Mr. Arthur Ngugi, Mr. Mike Aras an, Mr. Maxwell Lomosi, DeKUT 2017 graduates during a CeBIT Global Conference in Germany in 2017.



Our students Michael Ikua (left) and Alice Kwamboka (right) with the friends they made during their internship period at Technical University of Dresden - Germany

CHIA SEEDS AND LEAVES
THE SUPER FOOD TO CHERISH



Dr Monica attending to the Chia crop at DeKUT Farm

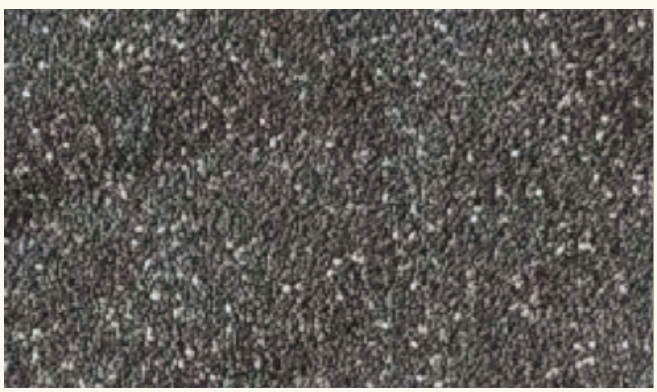
WHAT IS CHIA?

Chia (Salvia hispanica L.) is a traditional food crop belonging to *Lamiacea* family, native of Central and Southern America. It is widely consumed for various health benefits especially in maintaining healthy serum lipid level contributed by phenolic acid, omega-3 and omega-6 oil present in the chia seed. It is a plant of great economic importance to many Native American tribes in California, who have long used chia for food and medicinal purposes. *Salvia hispanica* L. acquired the common name chia from the indigenous South American people of the pre-Columbian and Aztec eras due to its medicinal uses. *Salvia hispanica* is the only domesticated plant, and not any other species of the genus *Salvia*. However misidentification can occur due to similarities with the wild species.

Chia seed and leaves are known to be protein-rich with good balance of essential amino acids making it suitable for malnourished children and adults living in rural areas who need better access to protein-rich food supply. The use of food with neutraceutical and functional properties for management of lifestyle diseases like diabetes, obesity, and cardiovascular problems is now gaining momentum among the public.



Chia crop



A mixture of white and black Chia seeds



White Chia seeds



Black Chia seeds

The Institute of Food Bioresources Technology, Dedan Kimathi University of Technology (DeKUT) is promoting chia crop cultivation among the small holder farmers and its incorporation into the locally existing products. **Dr. Monica Mburu (Ph.D.),** a Food Science Researcher works in collaboration with farmers in Nyeri County, where the crop has great potential.

In Kenya demand for functional food with multiple health benefits has increased with increasing public health awareness worldwide. Chia (*Salvia hispanica* L.) is an exotic plant in Kenya where the effects of new growing environments and agronomical treatments on seed quality has is being exploited. It has a promising future for food security, improved nutrition and health.



Chia Farm at Dedan Kimathi University of Technology

CHIA SEEDS AND LEAVES ESSENTIAL NUTRIENTS

Chia seed and leaves are protein-rich with good balance of essential amino acids making it suitable for malnourished children and adults living in rural areas who need better access to protein-rich food supply. It can enhance the nutrition status of food crop and fit in rotational farming. Chia seeds contain almost of all the essential nutrients such as protein, vitamins, omega-3 fatty acids, dietary fiber, antioxidants and minerals essential for optimum growth and development in good proportions. This is a superior food especially for infant complementary feeding. The high amount of alpha omega-3 is important in lowering the risk of cardiovascular heart disease

CHIA AN INDISPENSABLE CROP IN KENYA

The high malnutrition rate in Kenya is a serious public health problem that requires urgent attention from all sectors. Provision of nutritious food should be addressed across the food chain through introduction of novel crops that easily adapt locally and can be grown with the existing ones, like chia that can be an alternative to maize farming to enhance nutrition and supply.

Chia is more suitable in the food industry due to its important physiochemical and functional properties. It is an excellent agent in food thickening, gel formation, chelator, foam enhancement, emulsification, suspension formation, clarifying agent and as a rehydrating agent. This makes it commercially viable for the development of new products enriched with omega-3, protein, soluble/ insoluble fiber and phenolic compounds.

Research has shown that, chia seeds are also beneficial to animal feeds, where their addition resulted in a rise of alpha linolenic acid (ALA) and a reduction of cholesterol levels in eggs and meat.

INCORPORATING CHIA INTO YOUR DIET

Chia seeds

Chia seeds are very absorbent and develop a gelatinous texture when soaked in water making it easy to mix them into cooked cereal or other dishes. They can be eaten raw or incorporated in the diet to reap the positive benefits, including:

- Making a chia gel by adding a tablespoon in a glass of warm/hot water, cover for 5-10 minutes and drink on an empty stomach. Good for maintaining
- Adding a tablespoonful to the smoothie for protein and fat boost
- Sprinkling the seeds on your cereal, rice, yogurt or vegetables
- Adding to baked goods
- Using as an egg substitute in baking: Add a tablespoon of ground chia with 3 tablespoons of water, per egg in a recipe.
- Mixing with flour and seasoning when making a breaded fish, chicken or veggie dish, for that wonderful nutty flavor and crunch.

Chia Leaves



Chia fresh leaves

Chia leaves contain essential oils with the following compounds β-caryophyllene, globulol, γ-muroleno, β-pinene, α-humoleno, germacren-B, and widdrol, which have strong repellent characteristics to a wide range of insects which makes the chia plant suitable for organic farming. This oil can be used as a condiment or a flavor enhancer. Chia leaves can be used to make herbal tea as well as consumed as vegetables.

Products developed at DeKUT and exhibited at the Central ASK Show Kabiruini Nyeri



Chia supplemented yoghurt (Strawberry & Vanilla flavored)



Chia enriched maize flour cookies and cakes



A cake of Maize flour enriched with chia seeds

Chia seeds nut paste



Chia Seeds Macadamia Paste

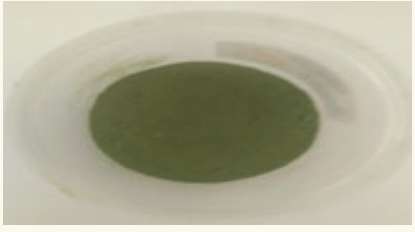
Dried Chia leaves products



Dried Chia Leaves – to cook as vegetables



Chia herbal Tea- to mix with tea leaves



Chia leaves powder – To sprinkle on food

Exhibition at ASK Show September 2017.







CONCLUSION

In Kenya, the performance of the agricultural sector bears a huge impact on the performance of the overall economy and is a critical component for both rural development and poverty reduction. Provision of nutritious food should be address across the food chain with introduction of exotic crops that easily adapt locally and can be grown with the existing ones. Chia is one of such crops that can enhance the nutrition status of food crop and fit in mixed cropping locally. In combination to other crops, chia can form alternative to maize farming in Kenya which has aggravated food insecurity in the country due to its unreliable supply and low in essential nutrients. Chia is known to grow in arid environments just like maize, therefore highly recommended as an alternative for the field crop industry. It tolerates drought and salinity conditions and does not with stand frost. Farmers need to be sensitized to the benefits of growing chia which can be consumed as a raw seed, processed into flour, blended with other food or as a vegetable. Technically, chia seed is the fruit of a plant, thus contains more complete protein than other traditional grains.

Research work is ongoing at the Institute of Food Bioresources Technology, Dedan Kimathi University of Technology, Kenya and Department of Food Technology & Nutrition, Makerere University, Uganda

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DEDAN KIMATHI UNIVERSITY FARM

The farm has three main sections i.e coffee, livestock and horticulture. The coffee section comprises of 145,444 young coffee trees and 35,153 old coffee trees making a total of 180,597 coffee trees. The livestock section includes a medium sized dairy herd and piggery. The horticulture section is composed of 18 acres of land with 8 acres under drip irrigation and 10 acres served by portable pumps. A total of 5 greenhouses have also been installed for horticulture production.

1. Coffee Nursery

The University farm is engaged in production of high quality coffee seedlings through Coffee Productivity Project (CPP) that was funded by the European Union.

Varieties of seedlings produced

The varieties being propagated in the nursery are Ruiru 11 and Batian coffee seedlings. Batian coffee seedlings are available for sale at subsidized price of KSh. 20 per seedling. The two varieties are resistant to diseases, fast maturing, high producing and have short picking period due to uniform maturity in comparison to traditional ones.

A total of 70,214 coffee seedlings have been sold to farmers during the 2017/2018 financial year. Currently there are 11,640 coffee seedlings ready for sale.



Germinating seedlings in propagator



Watering of the readily potted seedlings



Spraying activity on coffee seedlings in nursery



Coffee seedlings at various growth stages in the Coffee nursery

2. Coffee farm

The farm has a total of 180,597 coffee trees. Out of this 145,444 are young coffee trees replanted from the year 2012 under the coffee rehabilitation programme. These are Batian and Ruiru 11. The other 35,153 coffee trees are mature having been planted in 1980s.



Coffee berries on a branch of coffee tree

3. Livestock

The farm keeps dairy cattle, pigs, sheep and goats.

i. Dairy

The farm currently has a total of 70 cows. The herd is kept for milk production. The milk is supplied to University catering department, sold to staff and KCC.



Cows grazing in the field

ii. Piggery

The farm keeps pigs. On maturity they are slaughtered and sold to the staff.

The current number of pigs is 87.



Piglets resting

iii. Sheep and goats

Sheep and goats are reared as a way of diversification. On maturity they are slaughtered and sold to the staff. The current population is 12 goats and 61 sheep.



Sheep and goats; dairy cows at the back

4. Horticulture

The farm has a horticulture section that produces various vegetables mainly for use in the catering department and sale to staff. Currently 8 acres of land has been put under drip irrigation. In this portion, vegetables such as cabbages, onions, spinach, kales, carrots, capscicum, chillies, and dhania are grown. Five green houses are used to produce tomatoes and capscicum.



Nursery beds with seedlings



A photo of cabbages

UNIQUE PROGRAMS IN THE DEPARTMENT OF CHEMISTRY



His Excellency Uhuru Kenyatta, the President of the Republic of Kenya (2nd from left) and the Vice Chancellor, Prof. Ndirangu Kioni (left) listen on as BSc. Leather Technology students showcase products that they produced in their practical classes

By Dr. Paul Sang, PhD.

HEAD, DEPARTMENT OF CHEMISTRY

The department of Chemistry plays host to two very unique programs in applied sciences namely BSc. Leather Technology and BSc. Industrial Chemistry. The 2017/2018 academic year saw the Department make strides in both programs with introduction and launching of MSc. Leather Technology and MSc. Chemistry – to be launched soon. The MSc. Leather Technology is a particularly interesting one as we attracted African Development Fund grant to train personnel in this area. Currently, we have eight vibrant graduate students who are almost done with their first year of study and have started preliminary stages towards thesis research. It is worth noting that this is an area with acute shortage in the country and these eight will go a long way to assist in this area. The areas of emphasis in the **MSc. Leather Technology** program are footwear manufacturing, leather goods manufacturing, tannery engineering among others. The hope is that this will drive our Kenyan economy especially noting that the Leather Industry is one of the areas identified in the Kenya's vision 2030 as one of the drivers towards achieving industrialization. This capacity building among others is aimed at propelling this important area to prominence in the country. Furthermore, this program is one of the flagship programs aimed at achieving Kenya's development goals in line with vision 2030.

Today, we graduate the second cohort of **BSc. Leather Technology**. President Uhuru Kenyatta visited our Leather Technology stand during the 2017 Nyeri ASK and was very impressed that our program produces highly skilled graduates as evidenced by the products they show-cased in the stand. He concurred on the relevance of leather technology towards industrialization and attainment of the Kenya Vision 2030.

The Leather Technology program has also attracted coverage in the mainstream media. It's a subject worth discussing and pursuing. Below is a picture

taken during a visit by the Standard Newspapers which was published in the Newspapers' Hashtag edition on 9th November 2017 under the title *"Hides and Skins: Lucrative yet Untapped Leather Industry"*. The coverage was followed by renewed interest in this sector with the more recent being Nyandarua County government that now seeks to sponsor its youth for a diploma in Leather Technology to spur up growth in this sector while addressing the problem of unemployment. Hopefully these efforts and many others that follow go a long way in educating the Kenyan people about this sector whose capability particularly in production and export of footwear, leather and leather goods has not been fully exploited.



Dedan Kimathi University of Technology lecturer, Paul Sang (third left) takes students through leather tanning processes on Friday. Kimathi University is the only higher learning institution that offers a degree in Bachelor of Leather Technology in the country. [Kibata Kinuthia/ Standard]

Furthermore, our students benefit from industrial exchanges owing from their numerous trips to various industries in the country.

BSc. Industrial Chemistry is not left behind either. Today we graduate our third cohort in BSc. Industrial Chemistry. Our students are equipped with hands on skills in this highly practical subject with great opportunities in the industry. In the past few years, we have had our students attached to various industries and the reports from these industries regarding our students' practical skills, knowledge and discipline have been quite encouraging. We are excited to learn that a number of our Industrial Chemistry graduates are employment in various companies including Kenya Bureau of Standards, HACO Tiger Brands, New KCC, Jianxi Construction, Clinton Foundation just to name a few.

One of our most outstanding graduate in BSc. Industrial Chemistry is Jacinter Akoth. Jacinter graduated in 2016 and went on to be an entrepreneur. She produces and sells detergents and disinfectants in South Nyanza under her registered entity Nyota Chemicals. We are particularly intrigued with her among other entrepreneurs from our program as part of the emphasis in the program is the need to think out of the box and consider using acquired skills to create employment rather than being employed. Jacinter has the following to say:



Jacinter Akoth: Founder, Nyota Chemicals

Nyota chemical is a new business enterprise founded by Jacinter Akoth in Mbita town, Homabay County in July 2017 as a sole proprietorship. It deals with cleaning products such as multipurpose liquid detergent, disinfectant, odor remover and pit digest for pit latrines and hand wash soap under the brand name NYOTA. My main customers are schools, hospitals, households and salons. My business goal is to produce quality products that are efficient, environmental friendly and affordable to my consumers. Currently, I have two employees who assist me in the production process.

I ventured into this business after I had applied for internships with no success and decided to stay with my mum - a matron at St. Cecilia Aluor Girls High School. During my stay within the school compound, the students and kitchen staff were complaining of irritation and peeling skin from hands after using the detergent the school tendered and the inefficiency of their disinfectant in cleaning their toilets. Since the school bursar knew that I had graduated with BSc. Industrial Chemistry she asked me why they had the above effects and how the problem could be solved. As I pondered over this, I decided to offer a solution by producing a better detergent for them from the knowledge I gained at DeKUT. I purchased the necessary chemicals with the KShs. 2,000 I was left with after my graduation, produced 5L multipurpose liquid detergent and 5L disinfectant and gave the school as a free sample to test the efficiency and effects on hands after use. Surprisingly, they liked my products and the following term they gave me an order to supply them with ten -20L jerry cans of my products.

The knowledge I got from DeKUT Chemistry Department during my four-year course has been my backbone in the production of these products.



Nyota Liquid soap



Nyota Disinfectant



Nyota 20lLtLiquid soap



Nyota Hand wash

The opportunity was an eye opener and made me believe that getting employed is not the only way of survival for graduates in Kenya - we can also employ ourselves by providing solutions. With the money I raised after supplying the products together with the amount I received after working as an IEBC clerk, I registered the business and rented a one room house to concentrate fully in production and selling of the products.

Since my brand is still new in the market, I face stiff competition in procuring tenders from the county government and some other big schools but I believe that my desire and persistence for success will not let me down.

My primary objective is to persuade more customers to buy Nyota products by winning more tenders in schools this year and to purchase an efficient machine for production. I also aim at producing more cleaning products like bar soaps and changing my business into a company.

The knowledge I got from DeKUT Chemistry Department during my four-year course has been my backbone in the production of these products. I didn't have any industrial experience in this line of products but the training at DeKUT equipped me with the relevant skills in industrial chemistry that have enabled me start this business. I am therefore very grateful for all the hard work and dedication that DeKUT Chemistry department is putting to better the student's future. Thank you and may God bless you.

We celebrate Jacinter and encourage today's graduates and many more to think out of the box and consider being entrepreneurs.

Currently we are reviewing our BSc. Industrial Chemistry program to make it even more practical oriented and responsive to market needs and trends. Furthermore, we are proud to be a Department with highly qualified staff - all our academic staff have at least a PhD degree in various Chemistry disciplines. We have designed our programs to be unique as we draw from highly diverse knowledge from our members of staff educated in various countries - Kenya, USA, China, India and South Africa. This diversity has been a great strength to the chemistry Department as we are able to draw from experiences across the world.

While 2017 was a great year in the Chemistry Department, 2018 portends to be a greater year as we venture into the aforementioned graduate programs in Chemistry and Leather Technology. Being a premier University in Kenya, we envision leading the way in developing local talent in the untapped area of Leather Technology to propel the Leather Industry to where it should be globally particularly in value addition moving the country a step further from trading in raw hides and skins.

MAPPING WATER RESOURCES WITHIN MURINGATO RIVER SUB-CATCHMENT

A consultancy service by the Institute of Geomatics, GIS and Remote Sensing (IGGReS) - DeKUT

At DeKUT, programmes are offered under Schools and Institutes. Two of the programmes offered under IGGReS are: **Geomatics and Geospatial Information Systems (GeGIS) and Geospatial Information Science and Remote Sensing (GIS and RS).** GeGIS is concerned with the development and application of scientific, mathematical and technological aspects in the field of earth science, environmental science and engineering while GIS & RS brings together the disciplines of computing, surveying, mapping, cartography and visualization, environmental science and statistics for the collection, analysis and modelling of spatially based or associated information. GeGIS and GIS experts are equipped to provide solutions in sustainable environmental and natural resources management, exploration and mining, land ownership, urban and regional planning, facilities and utilities management, asset management, health planning, disaster informatics, demographic marketing etc.

DeKUT's strategic focus is anchored on three pillars namely Education, Research and Community Linkage. In contributing towards the establishment and sustainability of strong community partnerships, IGGReS recently undertook a consultancy project to map community water resources within the Muringato River Sub-Catchment. This Sub-Catchment stretches from the Aberdare Ranges to the West and the Muringato-Amboni rivers' confluence to the East. This consultancy was undertaken in order to equip the Muringato Water Resources User's Association (WRUA), with knowledge on the location and distribution of water features such as springs, boreholes, dams and abstractions within the Sub-Catchment. By undertaking this consultancy, DeKUT has established a strong relationship with the community within the Sub-Catchment in ensuring availability and sustainable management of water and sanitation for all which is a key sustainable development goal.

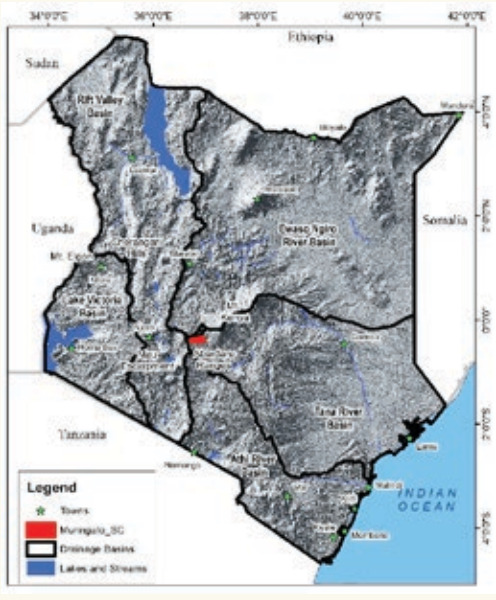
The Resource: Water

"That which is common to the greatest number has the least care bestowed on it. Men pay the most attention to what is their own; they care less for what is common", Aristotle.

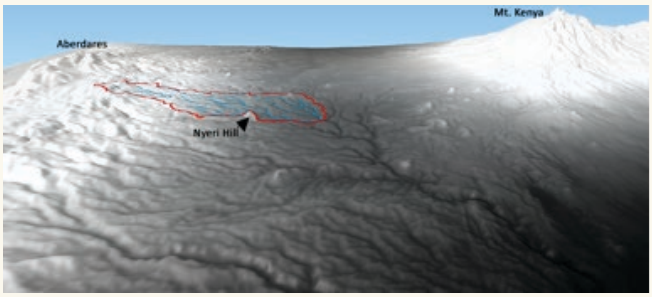
This is especially true for water resources. When water users have free access without coordinating its use then this leads to "the tragedy of the commons", a term conceptualized by Elinor Ostrom, the 2009 Nobel prize laureate in Economics. The tragedy is characterized by overexploitation and exhaustion of the resource, pollution, and rivalries in the use of water. There is need to regulate the use of the scarce water resources to avoid wasteful use and secure water for the future. We must therefore conciously make decisions on the development, allocation, and monitoring of water resources to ensure long term sustainable use. This tragedy of the commons has led to the establishment of coordinating institutions and the coercion of users to act in common interest to coordinate its use and avoid overexploitation. This is the logic behind the formation of Water Resources User's Associations (WRUAs).

The Location

In Kenya, the Water Act of 2002 provides for the establishment and operation of Water Resources Users Associations (WRUAs) for conflict resolution and co-operative management of water resources in catchment areas. A catchment area is all the area that drains rainfall to a river or lake. For example, DeKUT is located within Muringato River Sub-Catchment since all the land within DeKUT drains its water to the Muringato River.



Location of Muringato Sub-Catchment (red) in Kenya. It is located within the greater Tana River Basin. It is also found between two water towers; Aberdare ranges and Mt. Kenya.



3D view of Muringato Sub-Catchment (red) and the rivers (blue) which flow within the Sub-Catchment. The two water towers Aberdares and Mt. Kenya are also shown.

The Client: Muringato WRUA

The institution responsible for managing water resources within Muringato Sub-Catchment is the Muringato WRUA. For the WRUA to effectively carry out their mandate of ensuring sustainable water use within the catchment, they require an enabling environment of appropriate policies, strategies and legislation for sustainable water resources development and management. In addition they require to set up management instruments which will support the WRUA in their mandate. Such instruments include up-to-date and accurate databases and maps of the existing water resources which are an important prerequisite for water resource management in a catchment.

The task: Mapping water features

In February 2018, Muringato WRUA contracted the Institute of Geomatics, GIS and Remote Sensing (IGGReS) to conduct a baseline data survey to spatially locate surface water features and update their resource map. This was achieved through the guidance of the WRUA management committee as well as community members who guided IGGReS staff and students to the location of the features. In turn, the IGGReS team used handheld GPS devices and data recording sheets to collect information on the water features. In addition to the information collected on the ground, IGGReS generated Land Use & Land Cover (LULC) information such as forest cover, tea plantations and built up areas using skills in remote sensing as well as the stream network using skills in hydrological modeling.



Some of the water features which were observed within Muringato Sub-Catchment during the baseline data survey.

Validation Workshop

IGGReS prepared the water resources map and documented the findings. After completion of the map, they held a validation workshop on 7th March 2018 at Caritas, Nyeri to verify the accuracy of the results as well as to present the draft reports to Muringato WRUA members and other stakeholders. The final report was produced based on the suggestions and corrections provided during the validation workshop.

IGGReS staff during the workshop



Validating the map contents



Participants during the validation workshop



Photos taken during the validation workshop

Handing over the maps and report

The final report was officially handed over to the chair of the Muringato WRUA as well as other management committee members of the WRUA on 14th March, 2018 at the IGGReS offices in Academic block A. Overall, the consultancy provided valuable experience to the participating staff members and students of IGGReS in the application of skills taught in the courses provided through IGGReS. This provided an opportunity to work with the community and is a first step towards securing water resources by providing water management tools for decission making to the WRUA in the form of an updated water resources map and a basic water resource inventory document.



The Director IGGReS (third from left), IGGReS staff member (second from left) and a representative from Research, Technology Management and Community Linkages department(left) handing over the maps and reports to the Chairman of Muringato WRUA (right) and other members of the WRUA management committee.

Barazas

Muringato WRUA Management Committee organized three public forums (Barazas) which provided an opportunity for interaction between IGGReS as the consultants and the community within Muringato Sub-Catchment. The Barazas were held at Ihururu Chief's camp (16th March), Kihuyo Coffee factory (19th March) and at the Quarry next to ASK grounds (23rd March) to present the findings from the consultancy as well as receive feedback from the community on the prepared map. On their part, the community appreciated the effort and knowledge provided through the consultancy. Both staff and students from IGGReS were involved in the fruitful discussions.



(Left) a student from IGGReS illustrating a point, while (Right) participants engaging in a discussion on management of water resources.

Dennis T. Gitundu
Lecturer, IGGReS

G-Dev
everything geo

G-DEV (Geo-Developers)

YOUTH MAPPERS CHAPTER AT DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

You might be asking 'What is Gdev? Dubbed as Geo-Developers, is a student led association under the Institute of Geomatics, Geospatial Information Science and Remote Sensing (IGGReS). It was established with the aim to curate, empower, improve geospatial skills and cultivate a generation of young leaders. G-Dev is also a registered chapter under Youth Mappers - an International University Consortium on Mapping for Resilience. The program supports University efforts to offer meaningful global learning experiences, build a socially engaged citizenry, enhance long-term scientific capacity around the world and foster youth leadership.

What is our drive as Gdev? Passion and ability to embrace information and technology to revolutionize data so as to solve societal problems. Just last year one of the G-Dev members was selected in Kenya for a Youth Mappers leadership fellowship at Nepal in Asia, which was aimed at building and fostering young leadership.





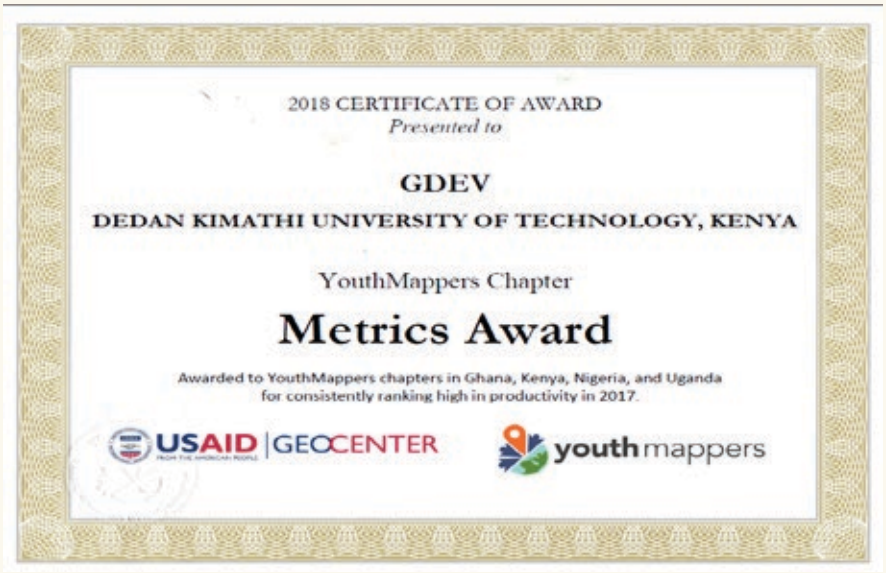


Aiming at contributing in solving societal problems, G-Dev collaborated with Map Kibera Trust and YALI in a project to assist in the fight against AIDS and Malaria in Siaya (Bondo) through mapping. This took place at Young African Leadership Initiative Regional Leadership Center in Kenyatta University. The project was designed to improve availability of geographic data for programs supported by PEPFAR, (U.S. President's Emergency Plan for AIDS Relief).



What are our accomplishments? G-Dev having the chance to participate and represent Youth Mappers at the High Level Meeting for Data and Development in Africa. This was a great opportunity to showcase our work in respect to the use of data in highlighting and addressing societal challenges for the realization of development in Africa.

Recently G-Dev was awarded a Youth Mappers Chapter METRIC AWARD for consistently ranking high in productivity in the world in 2017. G–Dev also received another award for the most active Youth Mappers Chapter in the world for organizing Youth Mappers activities and collaborative mapping projects at the local, regional and international level.



Many thanks to our Patron Dr Murimi M Ngigi, the Department of Geomatics Geospatial Information Science for the support and the G-Dev community.

Author: Kingori Elijah Karanja
Geospatial Information Science and Remote Sensing

THE BAMBOO ENRICHED YOGHURT – OUR JOURNEY



Bamboo enriched yoghurt is a dairy fermented product made from milk and enriched with bamboo sprouts powder. The combined health benefits of bamboo sprouts and yoghurt bring out a completely natural product that has numerous health benefits.

As young innovators we were motivated by the growing awareness on healthy living. We also managed to get some educative platforms that helped us grow our research capacity. To start with, we attended the Kenya National Innovation Agency and the JKUAT Tech Expo, which was a student based innovation program which aims at tapping young innovations and helping the innovators actualize their ideas. The journey to the Tech Expo began on 20th September 2017 with auditions. On the 5th of October we attended a short training on Intellectual Property Rights, Pitching and presentation at. This was followed by a competition on the 17th and 18th of the same month. These two days entailed an audition.

On 18th October, 2017 we attended a brief training session on the Intellectual Property Rights (IPRs), pitching and presentation. The training entailed guidance on different procedures of patenting our innovations.

The JKUAT Tech Expo 8.0 Competitions held on 9th -10th November.

The JKUAT Tech Expo is a student based technological and innovation platform that enables innovative students across the country to showcase their ideas as well as interested potential investors to actualize their ideas. The expo majors on the Sustainable Development Goals (SDGs). After a successful audition process, we were among those who took part in this educative technological competition.



The chief guest speaker was Olive Gachara - KCB Lions Den Investor and an entrepreneur. She has a modeling agency, earned a business degree, established her own consultancy firm, advised fashion publications and published a magazine. She encouraged people to live their lives in 3Ds, that is, Drive, Discipline and Determination. As an entrepreneur she advised people on the importance to learn marketing strategies.

The keynote speaker on 10th November, 2017 was Abel Masai - an award winning mobile solutions expert with vast experience in the design, development, deployment and delivery of mobile products ranging from Mobile Value Added Service to Mobile Commerce. He emphasized on consistency and never giving up.

The award categories were: junior awards, people's choice awards and the winner's awards. Bamboo enriched yoghurt emerged position 3 in the winner's awards.

The Kenya National Innovations Agency Competitions held on 20th February 2018

National Innovation Agency is an agency which plays a key role in motivating innovators from all over the country. It hosts and conducts the competitions to identify the most viable ideas for development. Some of the roles it plays include: influencing the establishment of science and innovation parks, develop and continuously benchmark national innovation standards based on international



best practices, increase awareness of intellectual property rights among innovators and to ensure inclusion of science, technology and innovation in the country' programs and policies at all levels among others .We were part of the competitions held on 20th February 2018 at the Utalii Hotel in Nairobi.

The major lessons learnt regarding our product and venture were on: scalability of the idea, marketing, safety of the commodity and the need to have enough background information concerning our innovation.

Rona Kambi, Grace Mawia and Margaret Nduta
BSc Food Science and Technology students
Producers – Bamboo Enriched Yoghurt

WHAT A SUSTAINABLE TOURISM AND HOSPITALITY MANAGEMENT PROGRAMME ENTAILS

…because they've raised the standards to succeed they're capable of rising up to every potential challenge and conquering every fearful spirit…

Today, the Institute of Tourism and Hospitality Management (IToHM) celebrates six years after its establishment, and more importantly, grateful to graduate the fourth cohort since the launch of the Bachelor of Sustainable Tourism and Hospitality Management programme. The "big picture" of the programme is to produce graduates with knowledge, skills and attitudes that promote sustainability in tourism and hospitality management. As argued by Nelson Mandela, one of Africa's legendary icon, "*education is the most powerful weapon which you can use to change the world*". Engraining sustainability principles in tourism and hospitality training is the best way to promote innovation, creativity and robust industry performance. What does sustainable tourism and hospitality management programme entail? Important things first! Tourism and hospitality are two broad disciplines.

Tourism, in simplest terms, is the study and management of processes and outcomes that result from attracting and hosting tourists to a destination. This can be illustrated through the simpler version of Leiper's model of a tourism system (fig. 1) that encompasses supply and demand. By extension, tourism is also the study and management of processes and outcomes emanating from the interrelations between the TDR (Supply) and TGR (demand).

Again, in the context of tourism, supply and demand are two broad areas. Supply deals with the entire tourism industry-goods and services providers; which basically refer to businesses and organizations through whose interactions and interrelations facilitate domestic and international temporal spatial movement of travellers from TGR to TDR via transit regions. Examples of the businesses and organizations include and not limited to: destination management teams, product developers, marketing organizations, transport logistics management (air and surface transportation companies, tour operators and travel agents), information outlets, policy making institutions, sports and recreation ventures, scholars and the society. Tourism as a phenomenon has outcomes that affect the economic, ecological and societal structural balance. The supply component of tourism deals with understanding the tourism market then scanning the environment for innovative and creative tourism product ideas, nurturing the ideas, designing and developing a product, commercializing and managing the product and customers. In this regard, tourism management is a complex specialized business undertaking!

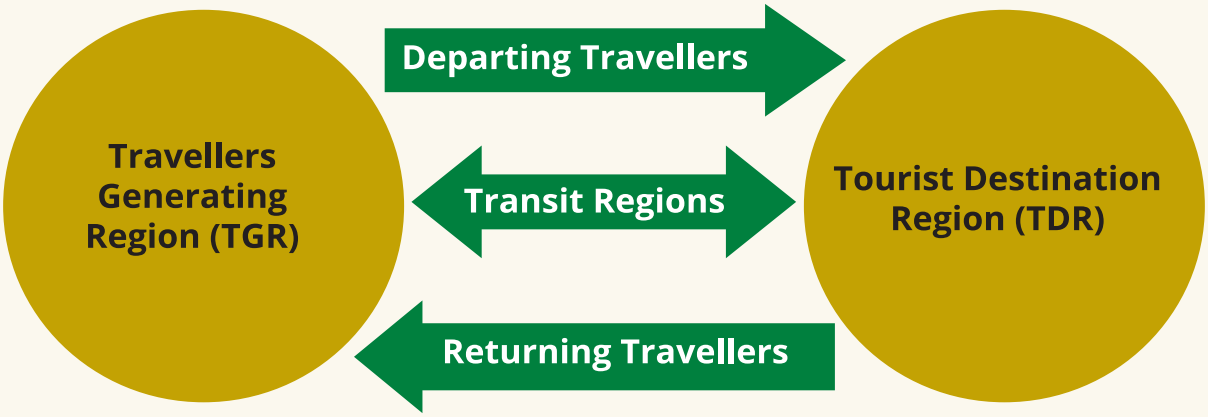


Figure 1: Tourism System Model (Leiper, 1990).

Demand on the other hand concerns understanding the consumer's (traveller's) needs and wants as well as the economic, socio-psychological and exogenous factors underpinning travel and consumption; hence responding with appropriate supply. In this regard, the supply-demand-society relationship can be illustrated as in figure 2.

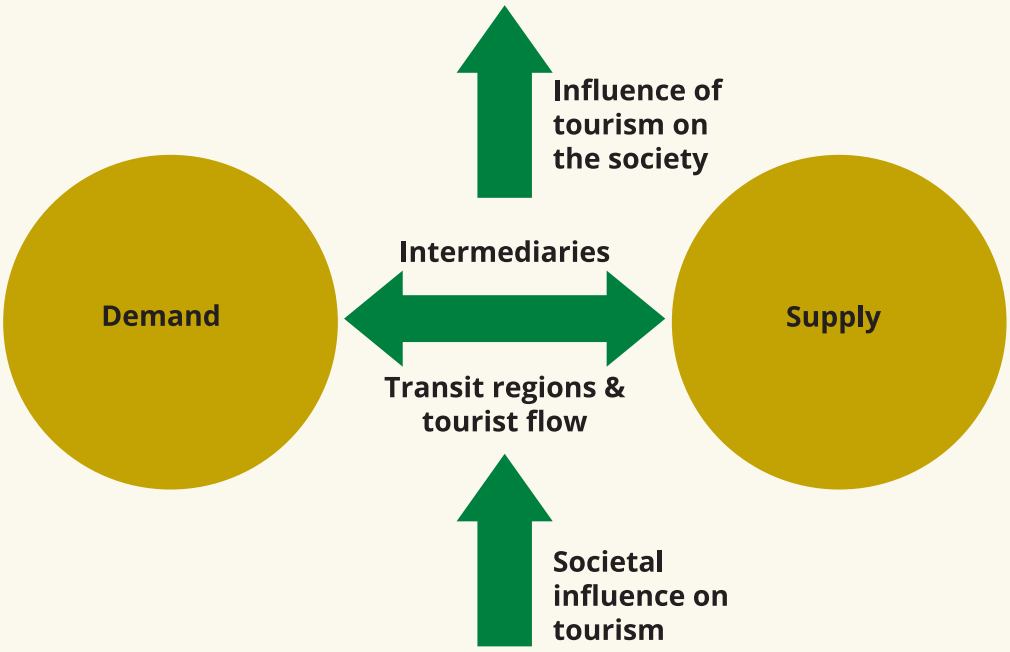


Figure 2: Interrelation between supply, demand and society

In relation to figure 2, one might ask, what is then the role of a tourism professional?

Unlike the goods industry, the tourism sector is dominated by services that are mostly intangible, inseparable from infrastructure and service providers, heterogeneous, lack total ownership, highly perishable and also characterized by spatial fixity (*insitu* nature). The tourism professional's role therefore is to knowledgeably and skilfully manage and maintain a sustainable balance between supply and demand while encouraging positive symbiotic interrelation between tourism industry and the society. In this regard, strategic thinking is of essence. The sensitivity of the tourism industry also demands that any tourism professional is conversant not only with the management of industry's image and brand but should also be in synchrony with the industry's dynamic technologies and regulations. Thus, the tourism professional must be well grounded in the concept of multi-disciplinary approach to management.

Hospitality on the other hand involves triggering, satisfying and managing the traveller's expectations in regard to culinary and rest-scape needs. Being one of the largest global heterogeneous sectors, it concerns ensuring superior quality food and beverages, conference and accommodation services, facilities and amenities. Businesses opportunities include and not limited to: hotels, restaurants, conference ventures, eco-lodges, event organizing firms, outside catering and pastry outlets.

Studying to manage the entire tourism and hospitality value-chain processes is demanding because it is about dealing with diverse people in terms of culture, profession, age, tastes and preferences that will also require polished interpersonal skills. Given the multi-disciplinary nature of tourism and hospitality sector, graduates need to undergo a rigorous structured training not only in the technical aspect of the programme but also in the soft skills-managing people-the workforce and the industry assets. Today, IToHM is proud to release in the market competent graduates whose training and mentoring involved theoretical, practical and experiential components. The academic industrial visits embedded in the curriculum enabled the graduates to interact and engage with industry practitioners in order to be abreast with the dynamic trends in the tourism and hospitality industry. Furthermore, the 24 weeks attachment enabled the graduates to get hands on training hence understanding the rigor and dynamism of the sector. The knowledge, skills and attitudes they have acquired over the years will enable them not only to be job seekers but creators as well. Congratulations graduating class of 2018! Because you've raised the standards to succeed, IToHM has no doubt that you're capable of rising up to potential challenges as they present opportunities. You've been appropriately empowered to conquer the fearful spirit!

Dr. Juma Misiko,
Director, Institute of Tourism and Hospitality Management.

ENHANCING KENYAN BRAND IDENTITY THROUGH TRADITIONAL CUISINE

Institute of Sustainable Tourism and Hospitality Management (IToHM), DeKUTGiven the international nature of the hospitality industry, cultural awareness and intercultural communication have become crucial to both hotel guests and employees. Modern day hotel professionals should therefore be aware of these aspects and the best ways of managing them.

Experiencing cultural differences is one of the key motivators for travelling. With the growing foreign tourists' arrivals, interpersonal interaction between individuals of different nationalities and cultures is a norm in the hotel industry. However, in their efforts to create a "home away from home" most star-rated hotels have responded by integrated foreign menus in their establishments. This has an obvious effect of giving the foreign tourist a home feeling, by serving them their "indigenous" delicacies. Unfortunately, this denies foreign visitors a chance to taste and feel the true Africanism that is based on the tradition Africa cuisine. True cultural integration in hotels should thus involve not only availing the Asian, European and American cuisine, but also encourage visitors to consume African cuisine in general and traditional Kenyan cuisine in particular. Kenyan chefs can make our traditional foods the world's trendiest and by doing so contribute to growth of tourism through food tours.

Developing unique Kenyan cuisine can brand the Kenya tourism sector significantly thus creating opportunities for Kenya as well as contributing to cultural integration. This will ultimately lead to appreciation and acceptance of other people irrespective of their colour, race and cultural background. Hotels should therefore work towards enhancing true integration by focusing on serving Kenyan dishes and encouraging foreign guests to consume them.

Traditional foods are obtained locally from the natural environment. They are procured either through farming or wild harvesting and utilized based on traditional wisdom and knowledge. Most communities embrace their indigenous food as a symbol of pride and culture.

Common Kenyan Traditional Cuisine

1. Irio

This is one of the most famous dishes in Kenya and has its roots in the Kikuyu community. Over the years, it has spread and generally become integrated among several Kenyan communities. It is traditionally prepared as a combination of black beans (*njahi),* green vegetables and green bananas that are boiled and then mashed up. Nowadays, whole kernels of maize are added to give the mash some extra starch and texture. This hearty and heavy Kenyan food is famous to eat with roasted meat (nyama choma) or any other Kenyan stew.



A plate of *irio* and some stew

2. Moringa leaves

Some Kenyan communities consume vegetables that have high nutritional and medicinal value. The Mijikenda community at the Kenyan Coast in particular are famous for consuming the leaves from *moringa* (*Moringa oleifera*). Fresh *moringa* leaves are known to offer seven times the amount of vitamin C found in oranges, four times the calcium provided by milk and four times the vitamin A content of carrots as well as impressive amounts of protein and potassium. All these nutrients combine to offer a variety of health benefits including increased energy and mental clarity, improved digestion and stronger immune system.



A plate of prepared *moringa* leaves

Integrating such traditional foods in the modern star-rated hotel menu has multiple benefits from enhancing true cultural integration, providing cheap and highly nutritional value food choices as well as enhancing the identity of Kenya.

By Peninah W. Chege

HUMAN RESOURCE DEVELOPMENT (HRD) AT DeKUT



Pedagogy (Effective teaching skills workshop) group photo

HRD is the part of Human Resource Management that specifically deals with training and development of the employee. It is the integrated use of training, organization and career development efforts to improve individual, group and organizational effectiveness. HRD develops the key competencies that enable individuals in organizations to perform current and future jobs through planned learning activities. It ensures that there is a match between the individual and organization needs.

HRD does not occur without the organization, so the practice of HRD within the organization is inhibited or promoted upon the platform of the organization's Mission, Vision and Core Values. HRD has a win-win outcome for the individuals and the organization and nations in the global economy. There is a lot of career success for the participants while the organization enhances standards of performance and success. Nationally, there is competence and prosperity.

Dedan Kimathi University of Technology (DeKUT) continuously positions herself as an exemplary employer across all cadres of staff by providing training and capacity building programmes. Once the University attracts qualified staff, the Human Resource Department is tasked with offering regular trainings and workshops.

DeKUT mainly uses two methods in a bid to train and develop its staff.

- On the Job training;
- Off the Job training;

On the job training methods used in training and developing staff include but are not limited to the following:

Committee Meetings

Committees are part of every-day activities and they effectively develop the staff because they are made up of staff from diverse professionals and ethnicity. This enhances learning by allowing members to see issues from different perspectives and discuss issues and trends that may impact on the organization;

Conferences and forums

Employees attend to various home and international conferences that are relevant to their careers and the organization at large. Upon return, the employees make presentations to other staff as a way of enhancing the individual's learning experience and as way of enhancing the organization.

Team Building activities

Fun days and team building activities provide great valuable learning experiences to staff.

Job aids

These are tools which include manuals and procedure guidelines that are offered to the staff and domiciled in each department. They assist the employees in the performance of their duties. DeKUT is ISO certified and it is a requirement that procedure manuals are available for various processes and they give a learning experience to the staff and more so the newly recruited members of staff.

Special projects

These are opportunities offered to staff to work on projects that are outside the normal duties. They offer a great learning opportunities to those involved. For example, someone who has expressed an interest in events planning could be given the opportunity to work as part of a special events team.

Performance appraisal

Performance appraisals are partly evaluation and partly developmental. In the 360 degree performance appraisal, feedback is gathered from supervisors, peers, other colleagues and sometimes from clients. The results of the appraisal are used to identify areas for further development of the employee.

Courses, seminars, workshops

DeKUT offers formal training opportunities to its employees either internally or externally. A trainer, facilitator and / or subject matter experts are brought on board to provide training sessions and the employees are sent on these learning opportunities during the working hours.

Off-the-job Training

Members of staff are admitted to Universities at home and abroad where they take up courses that are relevant to their professions. The courses are paid for by the University and for those who obtain scholarships study leave is granted.

Immaculate Kaihu
Human Resource Department















Personal Financial Management Workshop by Cytonn Investment Company



DIRECTORATE OF STUDENTS' WELFARE



The students' welfare services at DeKUT are provided under the Directorate of Students' Welfare (DSW). The Directorate co-ordinates all student activities and addresses issues that affect students' well-being - be they personal, academic, social or economic. It also acts as the link between the University Management and the students.

Financial Aid Programmes

The University, through the DSW, provides opportunities to the students to earn some income and work experience while studying. This is accomplished through a work-study programme which is administered by the Directorate.

The DSW also plays a significant role in identifying and recommending financially challenged students for the award of internal and external bursaries. Internal bursaries for needy students enrolled in DeKUT programmes are awarded based on the need of applicants. A case of the Directorate's intervention in external bursaries was in November 2016, where it took part in identifying a beneficiary of the **Canadian Federation of University Women-Vernon Club Scholarship (CFUW-V)**, a financial aid programme that supports **one needy final-year female student**. The recipient, Tracy Adhiambo Ayub, has since completed her studies and is one of the 'Class of 2018' graduands. This is what Tracy had to say about the CFUW-V programme:

"Certainly, this scholarship award was not only a financial benefit to me but also an attestation to what I have learnt and accepted that challenges in life are bearable, however difficult they can be. With so many deserving candidates, I am both honored and humbled to have received this award. I will always remember this act of generosity towards my education and will forever be grateful for the support that granted me a chance to bring my passion into reality. As I graduate with double Bachelor of Science



Tracy Adhiambo Ayub

Degrees in Telecommunication & Information Engineering and Electrical & Electronic Engineering, I am inspired to help others too as a way of giving back to the community. This scholarship affirms the sense of support the University has for financially challenged students and also reminds me that the community cares about our future by providing education to us. I am proud that my Alma mater has such an optimistic and strong programme to support its students. To the CFUW-V foundation, may the Almighty God expand your territories and multiply your blessings." - Tracy Ayub

Another initiative that has benefitted financially challenged students is the free accommodation programme. The DSW writes to external hostel providers to request for partnership with the hostel owners in supporting deserving students. For the last two years, this programme has supported at least eight students every semester. The intervention has enabled beneficiaries to continue with their studies unabated. David Ekai Esegon, a Geospatial Information Science and Remote Sensing student, is a recipient of this support and lauds the programme. This is what he has to say about free accommodation initiative.



David Ekai Esegon

"I am a third year student pursuing Geospatial Information Science and Remote Sensing Degree. I would like to appreciate the Director of Students' Welfare together with the wonderful staff at the DSW for the programme they started on sourcing free accommodation for students who have challenges in raising accommodation fee besides tuition fee. As a beneficiary, I can attest that life was stressful before, in that I could not be able to raise enough finances to facilitate both my upkeep and tuition fee payment. I mostly rely on HELB support to pay my tuition fee and for basic upkeep. Thanks to this initiative, I am now able to continue with my studies smoothly, knowing that I have somewhere to retire to after class. I extend my appreciation to the DSW staff and the hostel owner for the support and the love I have received from you. May God richly bless you." - Ekai

Clubs and Societies

One of the most active clubs in DeKUT is the DeKUT Travelling Theatre. This group has participated in a number of activities within Nyeri and beyond. In October last year, the students entertained guests at Outspan Hotel during the 50th Anniversary celebrations of the Central Bank of Kenya – Nyeri branch. The group has also represented the University during the music festivals and drama festivals at regional and national levels. Its performance has been outstanding since its inception in 2015. During this year's Central Region Universities and Colleges Drama Festivals which were held at Mount Kenya University - Thika, the Travelling Theatre team was the second runners-up in the cultural creative dance category.



DeKUT travelling Theatre performing a Pokot traditional cultural dance during a past function in the University Auditorium

Sports

In December 2017, the University successfully hosted the 6th National KUSA championship which saw a total of twenty-four (24) Universities compete in various disciplines. This event provided a perfect opportunity for our students to develop and utilize their talents in various sporting disciplines. In addition, the event brought about harmony between the University and the neighboring community through sharing of facilities, healthy competition and providing an opportunity for economic growth. The event equally promoted cohesion among different groups given that it came barely two months after the repeat General Elections. The event is held in high regard for being the last of its kind since future competitions will be organised as playoffs.








CATERING BLOCK









PROMOTING AN ENTREPRENEURIAL CULTURE THROUGH THE NEW SCIENCE AND TECHNOLOGY PARK AT DeKUT



Very soon, there will be a Science and Technology Park here at Dedan Kimathi University of Technology (DeKUT), are you ready to exploit it?

According to International Association of Science Parks (IASP), a science park (in this case Science and Technology Park) is an organization managed by specialised professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions. The first science and technology park was created on the campus of Stanford University (USA) more that 50 years ago. It has transformed the Silicon Valley area from one of the poorest regions in the USA into a global centre of technology, finance, education and research.

Since the inception of Silicon Valley, hundreds of similar high-tech clusters have been created in various parts of the world among the first being Sophia Antipolis (France) in Europe in the 1960s and Tsukuba Science City (Japan) in Asia in the early 1970s. Today, there are over 400 science parks worldwide and their number is still growing: USA leads with more than 150 science parks; Japan comes next with 111 science parks; China began developing science parks in the mid-1980s and now has around 100, 52 of which were approved by the national government and the remainder by local governments. Europe, Middle East, Australia and New Zealand are also listed as harboring several Science Parks. In Africa, there are 11 Science Parks (UNESCO, 2017). Most of these parks are in South Africa. Dedan Kimathi University of Technology and Konza Technopolis will be hosting the first two Science and Technology Parks (STP's) in Kenya and East Africa. What this means is that the two institutions will be the heart of the nation in creating wealth and fostering national development.

There is a high rate of unemployment in Kenya today. Universities and institutions of higher learning are training students only to release them to the world where they sometimes go unutilized due to the few employment opportunities in the job market and end up being wasted resources. The government is now focusing on manufacturing with the aim of growing the economy and creating jobs. The establishment of the STP at DeKUT and Konza Technopolis provides an opportunity to the youth and the old to venture into entrepreneurship. To be ready to fully exploit the existence of this STP, there is need to establish an entrepreneurship development centre with the aim of creating an entrepreneurial ecosystem by offering entrepreneurship training, mentorship, mobilizing resources and linking technopreneurs and entrepreneurs in general to experts in their specific fields who can empower them to turn their innovative ideas into viable businesses as well as guide them in establishing and managing successful businesses. In partnership with the national government, local governments and renowned business people, this can be achieved.

In creating an entrepreneurial ecosystem, Universities are catalysts (Mazzarol, 2014). DeKUT being a University whose major focus has always been being a Premier Technological University Excelling in Quality Education, Research and Technology Transfer for National Development is working towards ensuring that the STP brings maximum value to the community and the nation. For the University, it's an opportunity to live her vision.

By Wanjiru Kaburu

HOW DeKUT LED ME TO MY PATH



Valentine Rutto,
Graduand – BSc. Computer Science

My name is Valentine Rutto and I am a passionate software developer.

Like many young people, I joined the University with expectations drawn from movies and my older siblings stories but campus life is not any of that. My campus journey in particular was interesting to say the least. I was involved in almost all the campus activities. I never shied away from trying out new things and gaining new experiences. Along the way, I discovered my career and passion. I tried my hand in everything from sports, modeling to now my career - software development. I started by being the school ambassador as miss tourism 2013-2016. I then became the University's best athlete in 2014 and in 2016, I became the women tech makers lead; Women Tech Makers (WTM) **is a program by Google aimed at encouraging women to venture into STEM programs.** It is a community for women in technology that provides visibility for their products, technology resources to help them in their career and community where they can share their experiences and learn from one another. This was after taking interest in software development in 2015. This position came with new opportunities and challenges through which I have learnt and developed myself as a software engineer

DeKUT is a University whose core focus is creating the best environment for research, innovation and technology transfer. Since my passion is technology I can only speak about it and in this regard, let me tell you why you should join Dedan Kimathi University of Technology: DeKUT has the best technology communities in the country. There is the general body - Computer Society of Kimathi which houses all others like Google Women Tech Makers, Google Developer Group, Nyeri Javascript Community, DeKUT Android Developers and many others. Joining these communities was one of the best decisions in my campus life.

The technology community is a safe space to be as a nerd and expressive person about technology and entrepreneurial ideas. It gives you an avenue to discuss programming and technology with like minded individuals who are technology enthusiasts. You get to make friends who push you to be the best version of yourself in the path of your tech career. You meet your programming or accountability partners and future company co - founders here. You find mentors to help you in your journey. In these communities, members share new job opportunities, technology scholarships and the best methods on how to improve ones technology development skills. You get to know who and what to follow in the technology space and where to get these resources. As one grows in technology development, these communities enhance visibility for your products and increase ones chances for opportunities in the country (Kenya) and beyond.

My advice to anyone joining DeKUT or any University is: find your area of passion then take time to grow it. Take advantage of the resources available to you. Join clubs, take karate lessons, learn salsa dance, learn programming, learn how to build robotics, nurture leadership skills. Strive to remain relevant. Know what employers want then make sure you prepare yourself for that. Don't focus on the curriculum alone but on other things that make life beautiful and by focusing on your strengths and interests, discover yourself and develop your skills. Work on holistic development.

REFLECTIONS: CHOOSE TO DO THE RIGHT THING



It is always the right time to do the right thing ~ Martin Luther King Jr.

Congratulations graduands on your big day.

We are already four months into 2018. If you are wondering how the last four months went so fast, or how the last four or five years went so fast, you should then see how quickly the rest of your life flies. With every *tick tock*, a share of your life is fading away. It therefore matters how you spend every moment of your life. So far, have you set out your goals for this year? If you did, it is time to carry out a milestone check. If you did not, I believe it's not late for us to reflect on the words in James 4: 13-17

Come now, you who say, "Today or tomorrow we will go into such and such a town and spend a year there and trade and make a profit"— yet you do not know what tomorrow will bring. What is your life? For you are a mist that appears for a little time and then vanishes. Instead you ought to say, "If the Lord wills, we will live and do this or that." As it is, you boast in your arrogance. All such boasting is evil. So whoever knows the right thing to do and fails to do it, for him it is sin."

I want to emphasize on the last line of these words that talk about doing the right thing. As we go about our life journey, we always encounter situations that require us to make decisions. The requirement for decision-making is one that one runs with from childhood through adulthood to old age. This cognitive process that results in selection of a belief or a course of action among several alternative possibilities is a key element to a successful life.

In this rapidly changing, highly volatile global world, the need to do the right thing cannot be over emphasized. Most often, the right thing seems stupid, outdated, old-fashioned or not the "*in-thing*." The right thing is not necessarily popular and doing it may attract some form of judgment and societal punishment. However, people's opinions should not deter us from doing the right thing because they are minute compared to the wounds we inflict on our souls when we choose the other way.

Failure to do the right thing brings pain and suffering. Consider Cain of the old times who failed to give the right sacrifice to God and when he saw that his brother's sacrifice was honored but his rejected was angry, became jealous and ultimately shed his brother's blood. In addition, failure to do the right thing can cut short one's destiny. This is the reason Moses though he fought a complex fight delivering the Israelites from the oppressing hands of the Egyptians did not enter the Promised Land. Consequently, when Ananias failed to do the right thing, he and his wife died. Achan is another man who failed to do the right thing leading to death and destruction of his entire household. The same problem of failing to do the right thing stripped Solomon of kingship. In the present times, failure to do the right thing has cost lives through road accidents, drought as a result of deforestation, poor economic growth due to corruption and so forth.

For us to understand the importance of doing the right thing, we make reference from key persons recorded in the Bible with the greatest example being that of Jesus who purposed to do the will of His father even to the point of death on the cross. Reference can also be made from men like Joseph who faced numerous challenges from being sold as a slave, to being imprisoned for sins he did not commit but in all the difficulties, he chose to do the right thing until he was elevated to the position of a Prime Minister in a foreign land.

How do you do the right thing? Doing the right think is a conscious decision. So obey your conscious. You obviously know it when you are not choosing the right direction save for a few cases. Consider making decisions based on other key person's experiences. Enquire of God what you need to do and the path that you need to take. Like James, consider it all joy when you go through trials because then your patience is strengthened *(James 1:2-3)*. When choosing between alternatives remember the words of Senora Roy *"Doing the right thing is not always easy and it is not always popular, but isn't it enough that it's right?"*

Finally, when you have done the right thing, no matter how painful it is, remember the ultimate power of doing the right thing is receiving from God what He desires of you. Note that the right thing should not depend on the opinion of others but rather on your conscious.

Brothers and sisters, *"whatever is true, whatever is noble, whatever is right, whatever is pure, whatever is lovely, whatever is admirable—if anything is excellent or praiseworthy—think about such things"* (Philippians 4:8 NIV)

THE RIGHT THING IS THE ONLY WAY!



STUDYING AT DeKUT IS BEYOND ATTAINING A DEGREE

It is at the University where one gets to develop holistically being a phase that involves making decisions. This however depends with one`s passion and aggressiveness as well as the environment thus it is not always the case as it is at the same phase where one can self destruct and miss out in discovering and exploiting their abilities. I joined DeKUT back in 2014 - timid and naïve. Here, I did not only get a chance to pursue a degree in B.Com but also discovered that leadership is a skill that can be learnt and improved which I pursued with passion and grit. I believe that every phase of our lives is a learning phase and if we cannot learn through it, there is nothing much we can attribute to it. Through the opportunities and support at DeKUT, I have learnt a lot and grown immensely in my four years of study.

Being admitted at DeKUT was a special encounter by itself from the diversified cultures, University programs and great opportunities presented to students here. One great advantage that a student at DeKUT has over the other universities in Kenya is the timely completion of courses which gives one an upper hand in the market and also allows more time for self development. The University management is also very keen on holistic development and is supportive of the student activities such as the clubs, societies and the various programs that students come up with.

My drive supported by DeKUT environment allowed me to thrive in various activities. I was an active member of Christian Union and held various leadership positions, served as the Sergeant At Arms in Rotaract Club of DeKUT and also served as the Dedan Kimathi University of Technology Students Organization (DeKUTSO) Deputy President. Such activities are very important in the development of a student as an all round person and in such, key life lessons are learnt. Interacting with various people at the University also gave me a chance to be in touch with mentors who have been very instrumental in my personal growth. I encourage all students enrolling in this University and the current students to take advantage of all the opportunities here and by the time they finish their studies, they will look back and be proud of what they have become.

I will always thank God for giving me the chance to be part of the DeKUT community.

Sarah Machio,
Graduand – Bachelor of Commerce

DeKUT OUTDOOR ADVENTURE PROGRAMS



These programs are run by the Directorate of Students Welfare and can be grouped into 6 main categories as described below:-

(1) Climb to Educate

This is an initiative that prepares our students, Staff, Alumni and friends of DeKUT to annually climb the second highest mountain in Africa, Mt. Kenya. Since its inception in late 2014, **10** full-scale **mountain summits** have successfully been undertaken.



Season 4 on an early morning ascent. The sun rises behind the desolate Mt. Kenya Nival zone, the ice and shadows from the peaks cast scenes manifesting the modesty of the earth's greatness.

The **4-6 days' mountain climbing expeditions** expose the participants to a broad spectrum of environmental and social phenomena. They trek and set camp in small organized self-contained groups to traverse the ever-changing alpine wilderness and finally summit point, Lenana, 4985m. At the juncture, the program has produced 706 successful participants through 10 major expeditions distributed over 4 climbing seasons. The Students' Welfare Directorate is currently working on the 11th & 12th expeditions of Season 5, to be held on May 31st and Mid-September, 2018 respectively.

(2) Local excursions

They are either remote or non-remote depending on distance wandered from the University and travel-time to the nearest modern settlement in case of emergencies. The excursions have enjoyed a fairly prolific participation and comprise of:-

(A) University recreational excursions held once a month where any DeKUT member can participate

(B) Conditioning trips ranging from 10-18km for registered participants of Mt. Kenya climbing

(C) Orientation trips for freshmen to acquire a sense of the environment and thus settle within the shortest time.

Overall, **30 local excursions** involving 3,102 regular students, exchange students, staff and community members have been accomplished. However, not every excursion-participant is expected to Summit the Mountain for the latter is a **Challenge by Choice** activity. The excursions are conducted during weekends and are staged within Mt. Kenya forest, Aberdares, Nyeri and Laikipia counties.



Season 5 climbers cross the Gura river, a few at a time, over a flimsy make-shift bridge. Gura is sourced from the Aberdares and is among the fastest rivers in Kenya.

(3) Fitness program

This is accomplished through evening exercise sessions. Students assemble after classes for jogging, aerobics and stretching exercises that are conducted by a Student-fitness team and the Outdoor Instructor



(4) Shaolin Kung Fu Art of self -Defense

This Chinese martial art is philosophical and largely non-competitive. Anyone at any age can practise it. The techniques of Kung Fu are supported by scientific principles. Students meet every Tuesday and Thursday at *Munyeni* grounds for intense work-outs.



We are currently exploring ways to launch on-line tutorials for interested learners who graduate or cannot get enough time to attend the sessions at the stated time and place.

(5) Ropes Course & Team-Building Activities

The few low and high challenge elements are very popular with the students.



A Second year Building & Technology student soars in the sky to traverse the adrenaline-getting commando crawl element which he helped build.

(6) What goes up must come down!

Sunny Side Up is a cooperative and problem solving team building game where the students are tasked with tossing up a ball from one side of the mat and catch it with the other flipped side of the mat.





(7) Recreational Golf

The members of Climb to Educate initiative recently started Golf training after classes. The grounds adjacent to the Resource have generously provided space for a 3-hole simulated golf.



(8)Outdoor Environmental Activities

Under this program, the students Conduct monthly University recreational hikes to forests, natural features and other areas of environmental and historical interest.



Students and friends of DeKUT are escorted by Forest Rangers in the Mt. Kenya forest to learn and also contribute to the importance of conservation.



Up-skilling students from Institute of Technical and Professional Studies (ITPS)- DeKUT with Kenya Wildlife Service (KWS) personnel on an environmental conservation walk meant to sensitize the community on the importance of conservation.

The DeKUT Outdoor Activity programs are designed along specific goals and purposes**,** among them: To nurture and promote well rounded personalities and characters built around the values that DeKUT upholds and stands for. Below are the objectives:-

- **Cohesion and integration:** To promote the growth of DeKUT family where students, staff and community engage positively to deepen the individual's relationships in a new and refreshing way.
- **Talent nurturing:** To provide an opportunity for the participants to harness their youthful energy, brilliance and skills.
- To build the DeKUT **Endowment Fund**.

- **Life skills:** To equip the participants with leadership skills through endurance, sense of accountability, working together to overcome conflict and solve problems, expedition behavior and other emotional skills that they will require in the outside world.



The University organizes for the students to meet and interact with local resource people in order to gain informal education on conservation, morals, natural history and other tribal wisdom.

The Future of Outdoor Adventure Activities

People and communities thrive in positive interactions. The activities undertaken during Climb to Educate expeditions, Team building, Self defense, Challenge course activities as well as day-long excursions are aimed at enabling the University to inculcate certain values, culture, skills, attitudes and dispositions that promote the growth of DeKUT family where staff, students and the community interact positively and contribute to environmental peace.

Mwai Kennedy
Outdoor Instructor - DeKUT

MULBERRY AND ITS BENEFITS



Owing to The many lifestyle diseases a way has to be made to curb them. The best way to curb lifestyle diseases is by checking what we eat and drink. It has been verified that if everyone was to take the right amount of healthy foods, the doctors would be kept at bay.

Mulberry plant has long been ignored just like any other indigenous plant meant for wild animals. However, research has proven that mulberry plant and fruits are among what we should consider including in our diets in order to explore its non exhaustible benefits among them:

They prevent premature aging.

Aging of the skin is as a result of free radicals which settle on the skin. Mulberry contains antioxidants such as zéaxanthine which neutralise the free radicals hence leading to healthy looking skin. Free radicals also have effects on the eyes since they cause cataracts. Free radicals damage body cells which may lead to dangerous mutations which may be cancerous. Mulberry therefore also helps in cancer prevention.

Aid in digestion

They have a high fiber content that bulks stool enhancing bowel health by reducing constipation, preventing constipation and cramping.

Fiber also regulates cholesterol level and enhances health

Regulation of cholesterol goes a long way in promoting heart health. Mulberry also has a high level of iron; iron is an element of red blood cells, therefore addition of right amount of it leads to proper circulation which in turn enhances oxygen transportation. In addition, mulberry is also a rich source of calcium, potassium and phosphorus, all responsible for healthy bones - preventing osteoporosis (weak bones disease). Mulberry plant leaves are also as healthy. They can be crushed to make mulberry tea which may replace the normal tea or coffee we so hold important. Mulberry tea could be a resource for the diabetic as it regulates sugar level.

Aside from its health benefits mulberry plant is a tree like any other so having it in our home and institutions would also be a contribution towards maintaining a 10 percent forest cover.

By Mary Wanyoike, Nutrition and dietetics



BEATING THE FEAR OF CLIMBING THE MOUNTAIN AND THE LESSONS LEARNT

Mark Twain once said, "Keep away from people who belittle your ambitions. Small people always do that but the really great make you feel that you too can become great". I have felt great and honored being a member of this great and ambitious team 'DeKUT Climb to Educate'. Through it, I have been able to learn and experience a lot. It has also opened my eyes to several aspects of life. I have known struggle, failure and achievement. The concept of "One doesn't fall once and give up because what matters most in life is not the number of times that you fall but those you were able to stand and start over again each and every time you fell" has been greatly cemented in me.

I had always had this great interest of climbing Mt. Kenya, but fear had always pinned me down. Looking at myself, I had a big body and a big weight and I felt like this was a disqualification. I began turning up for the exercises, even though I wasn't sure of going to the mountain. I understand that at some points in life, we are all faced with the decision of whether to take a risk or not. What we should put into account is that greatness requires risk. Whether you succeed or fail, the act of taking a risk will stretch you and give you faith in yourself and confidence to do even more. May be we are meant to do things that stretch us so that we can build greatness in ourselves. It took me quite a long time to decide whether to take a step or not but I finally made up my mind to give it an attempt.

After making up my mind however, to a great extent I always felt afraid due to the death of a Chinese who had fallen in his attempt to reach Batian peak via ropes. This was reported just a week before the expedition date. To beat the fear, I told myself that this man fell in the battle field in the process of striving to achieve something. Yes, ships that are in harbor are most safe, but this is not what ships are built for. Human beings are equally meant to take the noble task of exploring the universe and connecting with nature.

We departed from school on 29th September, 2017 at around 11:30 am in a very joyous atmosphere with students shouting and chanting. This was after a Prayer from Rev. Fr. Prof. Mathenge, followed by the flagging off by the Vice Chancellor, Prof. Kioni and in approximately one-hour time, we were at Sirimon Gates. From there, we did a 9km walk to the first camp, 'Old Moses'. Along the way we learnt a lot, we saw a variety of trees such as the Red pencil cedar, Giant Ether etc. and also a variety of birds and animals. We also learnt about vegetation.

We arrived at Old Moses at around 6:00pm in the evening, set up our tents and took some mouthwatering and palatable meal and everyone finally retired to sleep. At exactly 6:00am the following day, everyone woke up to prepare for the next journey which was about 12km away and approximately 8 hours walk. After taking some heavy breakfast, we departed with our bag packs, tents, snacks and bottles of water. This was the 'mother of all the days', we call it so because it was the longest. We hiked in groups, chatting, making jokes, singing, learning different cultures from one another and appreciating them, exercising team work (being your neighbor's keeper), taking breaks at some points and sipping water more frequently. As we made our way up and down the mountain curves, we could see the serrated mountain peaks looming from a distance, and so we made our way towards them as fast as possible since we had to make it to base camp before nightfall. It was already evening when we approached the second camp

'Shipton', the air here was arctic cold, extremely chilling and numbing and it was also raining. At this camp, the peaks could be seen clearly. The heaven-touching highest peak of the mountain is Batian, then Nelion and the lowest Lenana. We camped here as we made preparations for the next day hike to the summit, 'Lenana'. At exactly 2:00am the next day we all woke up for Lenana which was approximately 6km away from Shipton Camp. This seemed much hectic to me and most of us, due to the extremely steep slopes and the snow that was all over, but at this point it was more of optional for one to reach the peak. We put on our full gear and took sips of hot coffee to raise our body temperature a little bit since it was extremely cold there. In 20 minutes time we were on trail with our torches and bottles of water. Some people felt exhausted at some points and made their way back to the camp. Personally I was so exhausted but I had to achieve my main objective of reaching the peak. I neither knew how nor did I care about the obstacles that I was likely to face but all I wanted was to reach the peak and in approximately 2 hours we were there – it was tough.

At the mountain, there are a variety plush herbs and shrubs and not to mention, the beauteous and soothing rainbow colored flowers that richly dazzle in the cold breezy air and makes the mountain look grimy in a beautiful manner, trees also sway their branches nicely. When at the top as the sun rises, the sunrays fall as blanket of white upon the greenery. There are also a number of rivers and streams and my friends called them roads of the mountain, others arteries of the mountain and some liquid souls of the mountain. The surface of the waters would glint with little sparkles like a thousand diamonds blessed with an inner fire. A drink from these rivers was very fresh and refreshing. During day time, the mountain peaks would appear like a row of arrow tips that are vampire white. Each one of them has a wave of snow rumbling down the sides and they all get crumpled at the base. In the contrary, the paths in the mountain are not as smooth as such; it is full of rocky ground which we hopped over happily, some part is snow-capped, muddy, there are steep slopes and at some point you are above the clouds. Its pure nature, very quiet - as you walk you can only feel the soft cool breeze caress and cool your body down, the noise from the roaring sounds of the flowing rivers and may be the sound of your heart beat. This is the beauty of nature though unforgiving when misused, hence through combined efforts together we can conserve it.

After climbing and coming back, I am now convinced that we (human beings) have the ability to accomplish anything. Just think big and don't listen to people who tell you it can't be done. Life is too short to think small. I never knew I could do it until I gave it a try. I have learnt not to belittle ambitions anymore and procrastination is a thief of time.

Important lessons from the experience:

The peak is climbed at 2:00am.

I never knew the far I had gone until the time the sun begun to rise. Dawn came when we were still at the peak. On our way down, I noticed that I had climbed a very steep slope. It was so steep that going down was not that easy. Looking at it in day light stirs up the feeling of impossibility. What does this imply? You can never see the impact of most of the things that you undergo during the darkest moments of your life. We only realize how great we have done when dawn comes, that time that the sun begins to shine bright in our lives. If the great thing would be placed in light, then people would not understand its value henceforth. Therefore, this calls for being courageous and strong and facing the challenges that come our way gladly. The worst mistake you can do is to give up.

The destination always seems near but in real sense it is not.

The peaks of Mt. Kenya are visible even when you are in Nyeri. As you move all the way up to Old Moses it seems to be much closer and closer you may think it's a 30mins walk from Old Moses, but is that the case? Not really. Well, it might be true but there are specific paths to be followed, there are challenges to be faced along the way. Someone viewing it from far cannot know until he/she gives it a try. What does this imply? Every good thing will always be visible for everyone. After one has achieved it, people might never think or even imagine what one went through in the process because in their view, it's that much simple even though most of them are never willing to try.

Its' all about pushing yourself – taking one more step.

Climbing was never easy at any instance. The journey ahead of me seemed to be more and more complex. In fact, at several instances, I thought of going back to the first camp. I pushed myself each and every time to take one more step. This is what life is all about, pushing yourself. Nothing will be easy, if you want to achieve something good you must push yourself. You must take one more step even when you feel weakest.

By; Odero.A. Elnino.
BSc. Industrial Chemistry
Dedan Kimathi University of Technology

DARING MT. KENYA IN THE SPIRIT OF EDUTOURISM



Edutourism is a term used to refer to learning that takes place outside the conventional classroom. It combines hands-on and experiential study spiced with fun. This approach to learning is enhanced in the reviewed Bachelor of Sustainable Tourism and Hospitality Management programme. The review process included additional of new units and improvement of the method of delivery to reflect the dynamic needs of the society, job markets and emerging entrepreneurial opportunities. Each unit in the programme is therefore uniquely designed in terms of teaching, evaluation and grading in order to meet and surpass the industry and society's expectations. One of the units that require outdoor classes is Basic Mountaineering and Rock Climbing.

Teaching of this unit incorporates class work, practical and field study. Practical tasks among other objectives, seek to enable a student develop the ability to perform basic wilderness first aid to a victim in the event of an incident. That is not all, the student is supposed to engage in a mandatory field study "a mountaineering expedition to Mt. Kenya". The expedition seeks to achieve the following objectives:

a) To enable students to learn through experience the influence of altitudinal changes on flora, fauna, weather and their hiking behaviours.

b) To equip learners with skills to recognize, minimise and manage the negative influences of altitudinal changes on mountaineers.

c) To endow leaners with skills to plan, manage logistics and execute responsible mountaineering expeditions.

d) To enhance the students' resilience, self-determination and self-esteem power.

e) To promote appropriate attitude, teamwork, social integration and cohesion among the hikers.

To participate in the expedition, each student is required to undertake a structured physical endurance training of not less than ten weeks. The training not only prepares the students physiologically and mentally but also spiritually and intellectually.

On 15th December 2017, a group of first year students in the company of three members of staff excitedly embarked on a lifetime trip to the sacred Mt.Kenya using the Sirimon route. It was exciting to imagine the joy of stepping on the land of brightness, spiritual inspiration, as the late Prof. Wangari Maathai –the 2004 Nobel Peace Prize laureate-fondly referred to it. Culturally speaking, this shy mountain –always hidden by white clouds- is believed by communities in Mt. Kenya region to be the source of all good things: abundant rains, rivers, streams and clean drinking water. Those who still hold onto their ancestral values pray while facing it, their houses' door face it, perform sacrifices facing it and when burying the dead they face Mt. Kenya. Therefore, stepping on Mt. Kenya is similar to walking through a holy land. Indeed the trip elicited great enthusiasm among the hikers.

On the way to Sirimon gate, the hikers passed through agricultural lands with remnants of indigenous trees. The team camped at the Sirimon gate (Montane forest zone) to get acclimatized to the mountainous weather. The following day the mountaineers journed through the bamboo forest, the timberline all the way to the heath and moorland. The third day they explored through the heath and moorland up to the Afro-Alpine zone. Each zone presented unique challenges and opportunities to the climbers.

The three days expedition was a great success. Learners got a first-hand experience of what it entails to plan and undertake a mountaineering expedition. In the beginning, all was "rosy", but as the team, saddled with individual backpacks, hiked through the altitudinal zonation from the montane forest through the Bamboo forest, Timberline forest, heath and moorland zone to the afro-alpine zone, the emotional changes were evidently visible! The initial enthusiastic and thrilled positive attitude towards the expedition gradually diminished as the hikers gained altitude and as their bodily physiological operations' adjusted to the prevailing

weather realities. Unpredictably reducing temperatures and atmospheric pressures varying at every altitudinal ascent, took a considerable toll on the climbers. Signs of tiredness were expressed in the manner through which the hikers paced up and communicated amongst themselves. Were it not for academic fulfilment, some climbers would have considered stopping at the timberline forest zone!

Teamwork and encouragement came in handy. Those whose energy levels and attitude had gone down were encouraged to do one step at a time. As time went by some distance was covered and as they say '*kidogo kidogo hujaza kibaba*", several kilometres were conquered! We all climbed high and came back safely! The mountaineering expedition is a perfect example of how real life is. At times things are easy, but at other times things become difficult. No matter how hard things may be, the ultimate goal must be achieved! In spite of the discouragements and numerous obstacles, one must be ready to face and brutally overcome them! Call it the principle of sticking to the roots! As Ben Carson argues, trees change their leaves and not their roots. One will never reach the destination if s/he stops and throws stones at every dog that barks! Dogs are obstacles; the focus therefore should be on the realization of the goal - this was our strength. The joy expressed by the hikers after making it to the Afro-alpine zone and back to the foot of the montane zone can't be explained in words. The trip provided an opportunity for the entire team to interact with experienced guides who provided interpretation about nature throughout the expedition. The hiking crew also observed sustainability issues affecting mountaineering namely *denaturation* and receding snowline occasioned by climate change; which in essence constitute important discussion topics in class! During the May –August semester 2018, the 2.1 (second year, first semester) students will explore Mt. Longonot, see you then for more learning adventures!



Photo 1: The team at a bonfire at Sirimon, a recap for Day 1 – 15/12/2017



Photo 2: Students enhanced camping and camp craft skills at the Sirimon gate campsite.



Photo 3: Students undertaking early morning physical exercise to enhance physical endurance at Sirimon Gate Camp on 16/12/2017 (Day 2).



Photo 4: Students in excited and energetic mood hiking to Old Moses through the Savannah rainforest transition Zone, Day 2, 16/12/2017.



Photo 5: Team hiking through the rainforest zone, Day 2, 16/12/17. This zone is dominated by pencil ceda, podo, African olive trees



Photo 6: Students undertaking early morning physical exercise to enhance physical endurance at Old Moses, Day 3, on 17/12/2017.
This Zone is the Hearth and moorland.



Photo 7: Group 5 Students preparing supper at Old Moses Campsite. This group activity was meant to enhance teamwork skills and promote socio-integration and national cohesion among the students.



Photo 8: Some students completing assignments while others share experiences of the day's expedition experience on 17/12/2017.



Photo 9: A KWS ranger talking to students about conservation & wildlife Management in Mt. Kenya national park at Old Moses campsite on Day 3; 17/12/2017.



Photo 10: The team hiking through the hearth and moorland to the Afro-alpine zone on day 3, 17/12/2017. The visible bunches of grass are called giant tussock.

Dr. Juma Misiko, Director, Institute of Tourism and Hospitality Management.

DeKUT – A LITTLE HIDDEN GEM



Wanjiru Kaburu
Alumnus – Graduating Class of 2015

I was a graduand during the 3rd Graduation Ceremony and I wrote an article on *"DeKUT My Pride"*. In it there was one vivid point, *"Dedan Kimathi University of Technology is a gem that only those keen enough can discover and only those wise enough can exploit"*. In the words of Richard Anderson, "It's a little hidden Gem". I meant it then, I mean it now and I will still mean it in the future.

I pride in having had a chance to discover "the gem" and as a result I fell so in love with this brand – DeKUT. Who does not love gems anyway? A young University crawling and learning to walk and as it is normal, there was stumbling and falling and every time with the strong faith I had (still have) in this brand, I reminded myself that a gem cannot be polished without friction. It has been three years now on the inside, as a staff member, and I have fallen more in love with this gem every day. With every friction, it gets better.

There was the 'storm' of accreditation of engineering programmes by the Engineers Board of Kenya (EBK). With structures, capacity and facilities that were already in place, DeKUT's Engineering programmes were all accredited among the first in the Country. Commission for University Education (CUE) and the Ministry of Education as a whole embarked on a mission to accredit Universities/ Higher Institutions of Learning in effort to ensure quality education. DeKUT survived this as well because quality education is the heart of this Institution. Everything here starts and ends with quality and this explains the vision *"A Premier Technological University excelling in Quality Education, Research and Technology Transfer for National Development"*.

Since inception, DeKUT has ensured timely completion of studies by students. This has been achieved through early admission. This has gone a notch higher from 2017 where the intake for students selected to join DeKUT by the Kenya Universities and Colleges Central Placement Service join in May just five months after completing their Kenya Certificate of Secondary Education exam. The university has dedicated staff who have also ensured uninterrupted learning for the students which has facilitated early completion rates not witnessed in other universities in the country. I recall inviting my form four classmates for my graduation and they were in shock as most of them were yet to start their fourth year of study by that time. DeKUT has invested in facilities and provided an academically stimulating, culturally diverse and quality learning environment that ensures holistic development of students, in tune with its mission statement.

Let me tell you about DeKUT's collaborations and partnerships. DeKUT is not just a Kenyan University but an world class international University by virtue of collaborations with Universities from other in the region and across the world especially in exchange programs, establishment of curriculums and double degree programmes all aimed at exposing students to the highest level of training in their respective fields. Some of the Universities which DeKUT has collaborated with are from countries such as is Japan, Germany, Canada and Hungary. Students and staff benefit through these collaborations by working together in exchange of technology and training towards enhancing education quality. This has made it possible for DeKUT to produce skilled and well equipped human resource to contribute to national development and the achievement of Kenya Vision 2030 and beyond.

Dedan Kimathi University of Technology is founded on the belief that self-actualization, and solutions to global challenges are attainable through a spirit of dedication, self–confidence, determination and best utilization of resources. The Institution also believes in being globally competitive through the employment of global competencies. To actualize her beliefs and goals, the University is committed to investing in her staff, facilities and systems to ensure an internationally excellent environment for education and for the furtherance of her aims and objectives. This is DeKUT's philosophy whose ultimate goal is to mould Dedan Kimathi University of Technology into an institution known for world class research, academic excellence, an exceptional staff and students and one that harbors the highest level of innovation, creativity, scholarship and enterprises, perhaps an MIT of Africa.

Nelson Mandela said that "*Education is the most powerful weapon which you can use to change the world*". Education is being redefined right here at the slopes. Be wise enough to exploit the opportunity.

Be part of something bigger than yourself.

Be part of Dedan Kimathi University of Technology.

WOMEN TECHMAKERS COMMUNITY – DeKUT CHAPTER



In an industry where women in technology are so outnumbered, finding and **having a voice *is critical to changing the dynamics*** to a more diverse direction in the future. Women TechMakers, a program by Google, has truly encouraged women to join the Technology field. Here in Dedan Kimathi University, the WTM program was launched in 2015 with Evelyn Kaberere (BSc. Information Technology 2017 graduate) as the lead. Since then, the number of ladies participating in tech events and involved in tech development has risen.

Here are some of the success stories from some of the ladies in the tech industry and how they started out:

SUCCESS STORIES



Sabina Benerdette Moraa,
WTM Co-Lead DeKUT Chapter,
Former Computer Society of Kimathi (CSK) Ladies Developers Coordinator,
BSc. Information Technology Graduand.



Faith Moraa,
WTM Co-Lead DeKUT Chapter
BSc. Telecommunication and Information Engineering Graduand

The first tech event Faith attended was the "She Will Connect" program - an Intel initiative with the same goal as Women tech Makers. The proceedings got

One day she purposed to attend an Internet of Things (IoT) Intel event where the idea of building a Breast Cancer Detector came to her. She worked closely with Evelyn Kaberere, former WTM Lead, in launching the WTM Community in Dedan Kimathi University. The Tech Community has improved her coding plus increased her networks and every day. From a place where tech was a complicated concept, today she finds it exciting and yearns to learn more.

She encourages more ladies to join the Tech Communities around them and not be afraid of this man's world – as it is perceived.

her intrigued and since then she has never looked back. Meeting women making it in tech was very inspiring and sparked her passion for coding. WTM has exposed her and enabled interaction with her fellow women in technology.

With her experience and knowledge, she wants to change the future of what is humanly and digitally possible.



Irene Ng'etich,
Co – founder Softballot
BSc. Telecommunication and Information Engineering Graduand

Joining WTM community is one of the best decisions she has ever made as it gave her a sense of direction career-wise and through it, she gained both technical skills through hands-on workshops and soft skills such as self-confidence, teamwork, leadership problem solving and immense knowledge.

Her greatest achievement is the Soft Ballot project that has seen her through East Africa Mobile Start-Up competition and Lions of Science competition in which they emerged winners.



Brenda Kangogo,
BSc. Information Technology Graduand
In her second year in the University, she joined Women Techmakers which opened her mind to a lot of ideas and gained new knowledge not only technology wise but also in other perspectives of life. Women Techmakers has contributed immensely to the woman she is today and believes that's only the start.



Valentine Rutto,
WTM Lead DeKUT Chapter
BSc. Computer Science Graduand

Being a Google women tech maker lead has been nothing but a great honor for me. I got a chance to actually change the narrative for women in tech. I have had hands on experience of organizing tech events that aim to improve the communities technical (programming) skills and making the community members aware of the latest technologies, best practices and the conversations people need to engage in on matters technology.

Since I joined the community in 2015 I have been very passionate about technology. I intend to apply the leadership and technical skills gained to provide solutions and create more technology communities especially in the rural areas providing more career opportunities and eventually curbing poverty.

Till We Meet Again

Till we meet again. Until yet again

In the corridors of our **small quarters**

Red love and redder tears of this **reality departure**

That made me sing songs of my slim being

Mosquitoes, tsetse flies and bee buzz **honey** songs

Longing for the bare foot feel on the marram back home

Paths that were arrow root farms when wet and dry dusty sahara sands

Till we meet again, until yet again

The **elegant girls** of this far land, the fairy tales of **freedom fighters**

Away from my motherland back in the black cotton soils

That had a wasp's waist and hippo hindquarters

The smiles that naturally revealed nature's beauty

The blue skies, green pastures and meandering mountain waters

Until yet again. When we meet again

Ooh if wishes were horses

Lovers riding on them to the moon to honeymoon

Explore and **build castles** on top of space

That when we will again

I will see you once more **Dedan Kimathi University**

We will speak again of the **unspoken**

The hidden tunes of **lovers' trembling lips**

And the breeze of the **mountain chills**

I will be **cool** once more...

I will **lone** no more...

I will peel off the skies and loosely **let go...**

I will maze at a blaze of your **dimple smiles**...

It will be **well** once more...

Till we meet again **DeKUT**

Your devoted staff and heavenly cleaned **pathways**

Are they cleaned by angels of heaven or?

Maybe cleaners of Solomon's palace

The limitless boundaries of the **impala conservancy** parks

Dome phases filled with receptionists

Who smiled at me. All moments of interaction

Ooh till we meet again DeHUB, when you are grown to a **Tech-city**

It shall be well again when we gulp delicacies at the **student mess**

Back at home I missed that little darling

The one I last bid bye and promised matrimony

The shoe maker I promised a suit

And my old granny who must wait until I take her to **Paris**

Ooh we shall meet again old buddies

Women hunting and **gambling** are slippery habits of the slippery

And my little sister, the one I **promised a pencil**

Ooh when we meet again sister

Now that you **flourished like banana leaves**

Will you **take a pencil for a present** dear?

Opemba Mathews

Computer Science Student

Chairperson BAKE – DeKUT Chapter

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

Better Life through Technology

SCHOOL OF ENGINEERING

- PhD Mechanical Engineering
- Master of Science in Mechanical Engineering
- Master of Science in Telecommunication Engineering
- Master of Science in Advanced Manufacturing &Automation Engineering
- Master of Science in Industrial Engineering and Management
- Bachelor of Science in Electrical and Electronic Engineering
- Bachelor of Science in Civil Engineering
- Bachelor of Science in Mechatronic Engineering
- Bachelor of Science in Mechanical Engineering
- Bachelor of Science in Chemical Engineering
- Bachelor of Education in Technology (Civil Engineering)
- Bachelor of Education in Technology (Electrical and Electronic Engineering)
- Bachelor of Education in Technology (Mechanical Engineering)

SCHOOL OF BUSINESS MANAGEMENT AND ECONOMICS

- PhD in Business Administration & Management
- Master of Science in Forensics and Security management
- Master of Science in Supply Chain Management
- Master of Science In Economics
- Master in Business Administration
- Bachelor of Science in Criminology and Security Management
- Bachelor of Purchasing and Supplies Management (BPSM)
- Bachelor of Commerce (BCom)
- Bachelor of Business Administration (BBA)
- Diploma in Security Management
- Diploma in Business Administration (DBA)
- Diploma of Purchasing and Supplies Management (DPSM)

SCHOOL OF HEALTH

- Bachelor of Science in Nursing (Direct entry)
- Bachelor of Science in Nursing (Upgrading)

SCHOOL OF SCIENCE

- Master of Science in Industrial Laser Technology and Photonics
- Master of Science in Industrial Mathematics
- Master of Science in Leather Technology
- Master of Science in Chemistry
- Bachelor of Science in Industrial Chemistry
- Bachelor of Science in Leather Technology
- Bachelor of Science in Actuarial Science

SCHOOL OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

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- Bachelor of Science in Business Information Technology (BBIT)
- Bachelor of Science in Information Technology (IT)
- Diploma in Information Technology
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INSTITUTE OF TOURISM HOSPITALITY MANAGEMENT

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- Mountaineering and Outdoor Expeditions Guiding

INSTITUTE OF PEDAGOGICAL AND ACADEMIC WRITING SKILLS (IPAWS)

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- Master of Science in Food Science and Technology
- Bachelor of Science in Food Science and Technology
- Bachelor of Science in Food Nutrition and Dietetics
- Diploma in Food Science and Technology
- Diploma in Coffee Technology and Cupping
- Certificate in Coffee Technology and Quality Management

INSTITUTE OF GEOMATICS, GIS & REMOTE SENSING (IGGRES)

- Master of Science in Geospatial Information Systems and Remote Sensing
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- Bachelor of Science in Geospatial Information Science and Remote Sensing

GEOTHERMAL ENERGY TRAINING AND RESEARCH INSTITUTE (GETRI)

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- Post Graduate Diploma in Geothermal Energy Technology
- Bachelor of Science in Geological Sciences and Technology

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- Diploma in Furniture Technology and Interior design
- Diploma in Metal work, Welding and Design
- Diploma in Building Technology
- Diploma in Leather Technology
- Diploma in Fashion Design & Interior Decoration
- Diploma in Electrical &Electronics Engineering (Power Option)
- Certificate in Furniture Technology and Interior design
- Certificate in Building Technology
- Certificate in Leather Technology
- Certificate in Fashion Design and Interior Decoration
- Certificate in Electrical and Electronics Engineering (Power Option).
- Certificate in Metal work, Welding and Design
- CCNA I, II,III ,IV

PROFESSIONAL AND CERTIFICATION COURSES

- CPA Sec. I-VI
- ATD Level I & II
- Associate in Procurement and Supply of Kenya (APS-K)
- Certified Procurement and Supply Professional of Kenya (CPSP-K)
- Siemens Mechatronics Systems Certification Program (SMSCP) LEVELS 1-3

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Better Life through Technology

DeKUT is ISO 9001: 2008 Certified

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

Better Life through Technology

4TH DeKUT INTERNATIONAL CONFERENCE ON SCIENCE, TECHNOLOGY, INNOVATION AND ENTREPRENEURSHIP

ANNOUNCEMENT AND CALL FOR PAPERS AND EXHIBITORS

Date: 7th – 9th November, 2018

Venue: Dedan Kimathi University of Technology, Main Campus, Nyeri, Kenya

CONFERENCE THEME

Nurturing and Leveraging Science, Technology, Innovation and Entrepreneurship for Sustainable Development

Aim: To provide a forum for researchers and practitioners to discuss, engage and publish research information

CONFERENCE SUB THEMES

1. Engineering Technologies and Innovations for Industrialization
2. Business Management and Entrepreneurship for Sustainable Development
3. Basic and Applied Sciences for Advancement of Research and Innovations
4. Innovative Agricultural Sciences and Technologies for Sustainable Food Production and Security
5. Water, Energy, GIS and Remote Sensing, Environment, and Climate Change
6. Health Sciences and Community Development
7. Information and Communication Technology for Sustainable Development
8. Tourism, Wildlife and Hospitality Management
9. Policy, Culture and Governance for Sustainable Development
10. Security Management and Innovations
11. Trends in Technical Education and Training
12. African Development, Harnessing Traditional Knowledge
13. Data Science for Advancement of Sustainable Development

Note: Guidelines to authors, abstract template and conference registration form are available on the University website (www.dkut.ac.ke)

IMPORTANT DATES

Deadline for Abstract Submission	25th May, 2018
Notification of Abstract Acceptance	29th June, 2018
Deadline for Submission of Full Papers with Revised Abstracts	17th August, 2018
Early Bird Registration	By 7th September, 2018
Normal Registration	By 12th October, 2018
Late Registration	After 12th October, 2018
Deadline for Exhibition Registration	12th October, 2018
Conference Dates	7th – 9th November, 2018

CONFERENCE REGISTRATION FEES

PARTICIPANTS	EARLY REGISTRATION (By 7th September, 2018)	NORMAL REGISTRATION (By 12th October, 2018)	LATE REGISTRATION (After 12th October, 2018
East Africa Community	KES 8,500 US$ 85	KES 10,500 US$ 105	KES 11,500 US$ 115
Other Regions	KES 10,500 US$ 105	KES 12,500 US$ 125	KES 13,500 US$ 135
Students	KES 3,000 US$ 30	KES 3,500 US$ 35	KES 4,000 US$ 40
Exhibitors	KES 20,000 US$ 200	KES 20,000 US$ 200	KES 20,000 US$ 200

Payments should be made through cheque, electronic funds transfer or direct cash deposit to:

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KCB Bank, Nyeri Branch, Kenya
Account number: 1121318274
Bank code: 01, Branch Code: 112
Swift code: KCBLKENXXX

OR

Dedan Kimathi University of Technology
Consolidated Bank, Nyeri Branch, Kenya
Account number 10061200000062
Bank code: 23, Branch Code: 007
Swift code: CONKKENAXXX

Note: Conference registration fees will cover refreshments, lunch and conference materials only. Hotel accommodation is available within Nyeri town and booking can be facilitated through the conference secretariat on prior request.

If you have any questions, please contact;
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