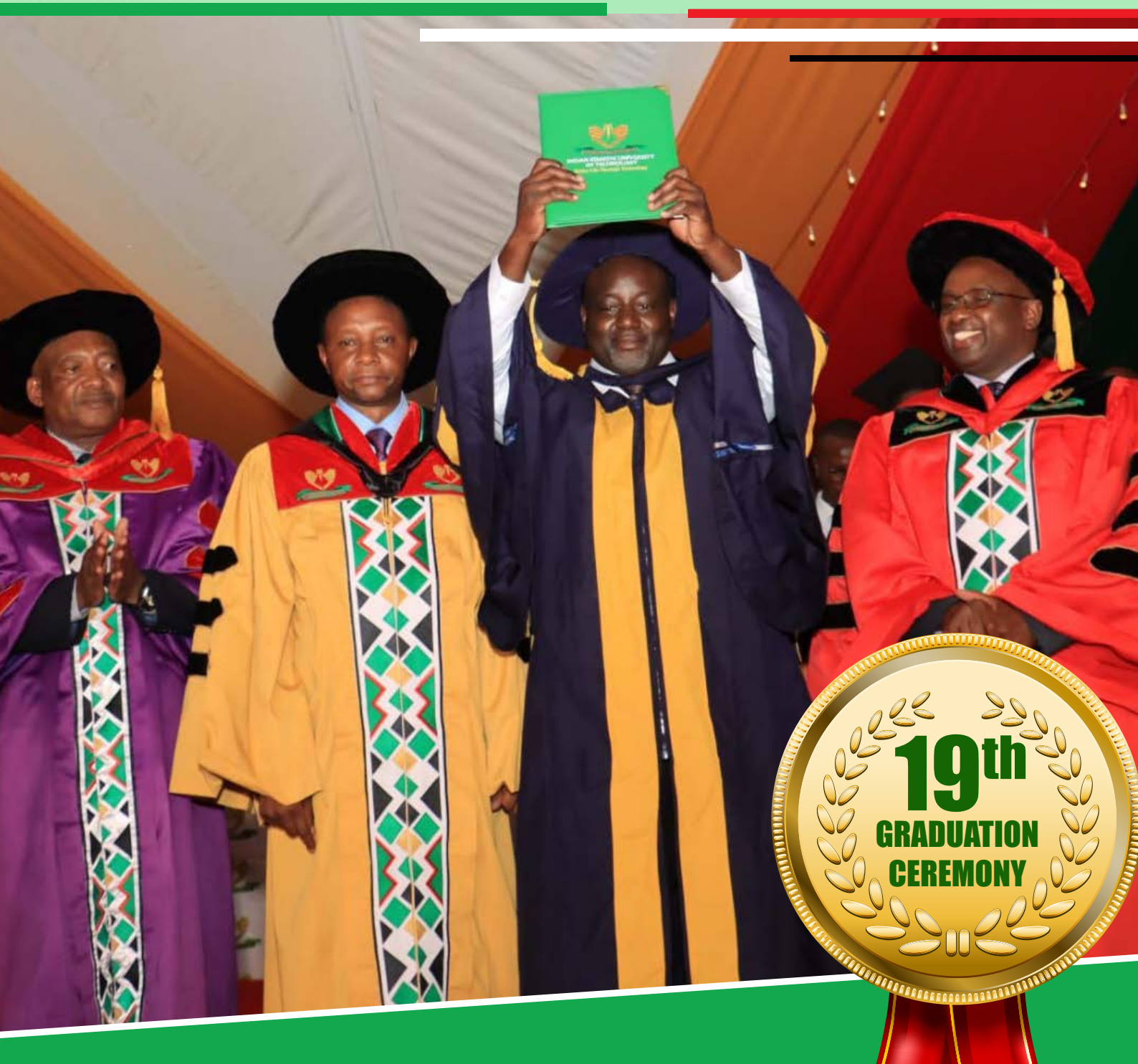
Dedan Kimathi University of Technology

DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

UNIVERSITY

Souvenir Magazine



In This Issue



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MESSAGE FROM THE CHANCELLOR



General (Rtd) Dr. Julius Waweru Karangi
EGH, CBS, DCO, LOM
Chancellor, DeKUT

On behalf of the entire Dedan Kimathi University of Technology fraternity, I warmly congratulate the Class of 2025 on achieving this remarkable milestone. Today, we celebrate not only your academic accomplishments but also the resilience, determination, and dedication that have defined your journey at DeKUT.

As you transition into the next chapter of your lives, I wish you every success in the paths you choose, whether you are advancing your studies, entering the professional world, or exploring entrepreneurial and personal pursuits. The knowledge, skills, and values you have cultivated here provide a strong foundation for you to excel and make a meaningful impact wherever you go.

I encourage you to step into the future with confidence, integrity, and a clear sense of purpose. As proud ambassadors of DeKUT, may you continue to embody our core values; Innovation, Scholarship, Diversity, Integrity, and Teamwork. These values will guide you as you contribute to the advancement of your communities, industries, and our Nation.

Once again, congratulations on this exceptional achievement. May the journey ahead be rewarding, impactful, and filled with opportunities for you to shine. We celebrate you, and we look forward to the transformative contributions you will make in the world.

Congratulations to the Graduating Class of 2025!

MESSAGE FROM THE COUNCIL CHAIRMAN



Dr. James Kariuki
Council Chairman, DeKUT

On behalf of the University Council, it is my sincere pleasure to welcome you as we celebrate the 19th Graduation Ceremony of Dedan Kimathi University of Technology. This occasion marks an important milestone in the lives of our graduates and reaffirms the University's steadfast commitment to academic excellence, innovation, and service to the Nation.

This year, the University has continued to distinguish itself through outstanding achievements, including recognition at the USAWA Awards for advancing gender equality, emerging 1st Runner-Up nationally in the SDGs Awards 2025, and earning commendations at the Commercialization, Entrepreneurship and Innovation Leadership (CEIL) Summit. These accolades reflect the shared dedication of the Council, Management, staff, and students, and reinforce DeKUT's place as the Premier University driving Kenya's technological and socio-economic transformation.

To the Graduating Class of 2025, we celebrate your resilience, hard work, and accomplishments. As you embark on the next phase of your journey, we urge you to uphold the values of integrity, innovation, and service. The knowledge and competencies you have gained at DeKUT prepare you to contribute meaningfully to society and to lead positive change wherever your paths may take you.

Congratulations once again to all graduates, and thank you to the entire University community and our partners for your unwavering support and dedication.

MESSAGE FROM THE VICE CHANCELLOR



Prof. Eng. Peter N. Muchiri, EBS,
Vice Chancellor, DeKUT

It is my honour to welcome you to this 19th Graduation magazine of Dedan Kimathi University of Technology. Today, we celebrate the hard work, resilience, and excellence of our graduands, and we appreciate the parents, guardians, faculty, staff, and partners who have supported their journey.

This year, the University has recorded significant milestones across our Centres of Excellence, reinforcing our commitment to innovation and applied research. Among the notable achievements are the renewal of the UNESCO Chair in Anticipatory Socio-Technical Systems, impactful sustainable energy innovations by the Dedan Kimathi Centre for Energy Studies, and the Coffee Technology Centre's continued support to farmers through soil testing, specialized training, and extension services.

Our research and innovation ecosystem continues to expand through advancements such as AI-driven healthcare solutions at DSAIL, improvements in robotic mobility devices at the Centre for Robotics and Biomedical Engineering, and public health pilot projects under the Centre for Health Research and Innovation. The Siemens Centre has further strengthened Industry 4.0 competencies, while the Startup and Incubation Centre have nurtured award-winning student innovations.

Beyond academics, our students have excelled in leadership, creativity, and co-curricular activities. Highlights include participation in high-level public lectures, the Climb to Educate experiential program, the Annual Career Fair, representation at the African Pétanque Championships, and the ENGAGE Project's AI and data science training. The DeKUT Wildlife Conservancy has also grown its capacity as a living laboratory following the addition of new wildlife species.

To our graduands: today marks the beginning of a new chapter. Your dedication, discipline, and resilience have brought you this far, and we are confident that you will carry the DeKUT spirit of excellence into your future endeavors. You remain valued ambassadors of this University.

DeKUT RECOGNIZED AT THE SUSTAINABLE DEVELOPMENT GOALS (SDGS) AWARDS 2025



1st

Runners Up

in the National Government category at the Annual Sustainable Development Goals (SDGs) Awards 2025.

DeKUT has once again demonstrated its leadership in sustainability after being recognized as the 1st Runners Up in the National Government category at the Annual Sustainable Development Goals (SDGs) Awards 2025. The prestigious event celebrates institutions that are making outstanding contributions toward achieving the global development agenda. Representing the University at the ceremony was the Deputy Vice Chancellor, Administration and Finance, Prof. Esther Magiri, whose presence underscored DeKUT's unwavering commitment to sustainable development. Her participation highlighted the University's deliberate efforts to integrate the SDGs into its core operations through research, innovation, community engagement, and institutional excellence.

Over the years, DeKUT has strengthened its role as a centre of innovation and transformative research, championing solutions that directly contribute to economic, social, and environmental sustainability. This recognition therefore serves not only as an honour but also as a reaffirmation of the University's dedication to supporting national development priorities and contributing meaningfully to global sustainability goals.

As DeKUT continues to amplify its impact, the award signals a strong commitment to advancing practical, research-driven initiatives that foster long-term growth and societal well-being. The University remains steadfast in its mission to develop technologies, knowledge, and partnerships that will shape a more inclusive and sustainable future.

DeKUT RECOGNIZED FOR SUPPORTING STUDENT-LED INNOVATION CLUBS AT CEIL SUMMIT

DeKUT has once again demonstrated its leadership in nurturing innovation and entrepreneurship, after receiving a prestigious award during the Commercialization, Entrepreneurship and Innovation Leadership (CEIL) Summit held at Pride Inn Paradise, Mombasa.





The award was presented by the Head of Public Service, Hon. Felix F. Koskei, EGH, to the University's Vice Chancellor, Prof. Eng. Peter N. Muchiri, EBS, the Deputy Vice Chancellor, Academic Affairs and Research, Prof. Eddy Owaga, and the Director of the DeKUT Startup and Incubation Centre (DeSIC), Dr. James Wakiru. The recognition highlighted DeKUT's outstanding support of student-led innovation clubs, which serve as incubators of creativity, problem-solving, and entrepreneurship among the youth. Through initiatives such as the DeSIC, DeKUT has positioned itself as a hub for innovation and commercialization of research. By empowering students to establish and grow innovation-driven enterprises, the University contributes significantly to Kenya's knowledge economy while cultivating a generation of solution-oriented leaders.

This recognition at the CEIL Summit affirms DeKUT's commitment to its mission of being an entrepreneurial University that not only advances academic excellence but also transforms ideas into impactful solutions for society. The University's continuous investment in student innovation aligns with its vision of commercializing research and fostering sustainable development through technology and entrepreneurship.

DeKUT LEADS KENYA'S DEBUT AT THE AFRICAN PÉTANQUE CHAMPIONSHIPS IN MAURITANIA





Team DeKUT embarked on their journey to Nouakchott, Mauritania on 21st November, 2025, for the African Pétanque Championships for Men. The team comprised Brian Mundia, Zebby Arnold Akatch, Meshack Kipsang, an additional player from Mount Kenya University, Coach Margaret Gicheru from DeKUT, and Mr. Maina Kamau, the Head of Delegation and President of Pétanque Kenya. The team marked Kenya's first-ever participation in this prestigious continental tournament. Pétanque is an inclusive, precision sport of French origin, is still relatively new in Kenya and continues to grow under the leadership of Coach Margaret.

DeKUT is honoured to be among the pioneering institutions advancing the sport locally. Participation in the championship provided the team with invaluable exposure and the opportunity to learn from nations with decades of experience in the game. As a sport accessible to individuals of all abilities, pétanque aligns strongly with DeKUT's commitment to promoting diverse, inclusive, and globally competitive sporting opportunities. This milestone not only elevates the University's sporting profile but also strengthens Kenya's emerging presence on the African pétanque stage.

A proud moment for DeKUT and for Kenya as we continue championing innovative and inclusive sports development.



DeKUT HOSTS THE EUROPEAN FILM FESTIVAL (EFF) CAMPUS EDITION, CELEBRATING STORYTELLING AND GLOBAL DIALOGUE



DeKUT had an honour of hosting the European Film Festival (EFF) Campus Edition, a celebration of cinematic excellence, creativity, and cross-cultural dialogue. The event brought together students, filmmakers, creatives, and development partners for a vibrant exchange of ideas centered on the transformative power of film.

In attendance were H.E. Ondrej Šimek, Deputy Ambassador of the European Union to Kenya, and Ms. Marie Ottosson, Head of Development Cooperation and Acting Chargé d'Affaires at the Embassy of Sweden. Their presence underscored the strong international partnerships and shared commitment to youth empowerment, creative expression, and sustainable development.

The festival offered a rich and interactive program, beginning with a film pitching workshop designed to equip students with practical skills in storytelling, concept development, and presenting their ideas to potential producers and funders. This was followed by the screening of two thought-provoking films, Triangle of Sadness and Murder Camp, which sparked meaningful dialogue among participants.



A highlight of the day was an insightful panel discussion featuring industry experts and creatives, who delved into critical themes such as the art of storytelling, the technicalities of film production, and the role of cinema in shaping societal narratives and addressing global challenges. The session encouraged reflection on how young filmmakers can influence change through authentic and powerful visual stories.

The event also provided a dynamic networking platform for students, upcoming filmmakers, and key stakeholders from both the film and development sectors. It was an invaluable opportunity for emerging talent to gain exposure, seek mentorship, and build relationships that may shape their future careers.

DeKUT remains committed to nurturing creativity, innovation, and global citizenship among its students. As a centre for academic excellence and forward-thinking engagement, the University is proud to have hosted an event that not only showcased film as an art form but also as a catalyst for dialogue and transformation.



RTD. GEN. DR. KIBOCHI DELIVERS A PUBLIC LECTURE ON "THE ROLE OF LEADERSHIP AND TECHNOLOGY IN GLOBAL SECURITY MANAGEMENT: LESSONS FROM THE MILITARY," AT DeKUT





Dedan Kimathi University of Technology (DeKUT) was honoured to host Rtd. General Dr. Robert Kibochi, EGH, CBS, PhD, for a highly engaging and insightful public lecture titled *"The Role of Leadership and Technology in Global Security Management: Lessons from the Military."* The event attracted an enthusiastic audience comprising students, staff, and distinguished guests from various sectors.

Rtd. General Dr. Kibochi brought a wealth of experience, knowledge, and real-world insight to the University stage. His lecture highlighted the evolving landscape of global security and the pivotal role that leadership and technological innovation play in responding to both local and international security challenges.

Drawing from his distinguished military career and extensive academic background, Dr. Kibochi offered compelling reflections on leadership, decision-making under pressure, logistics coordination, and strategic technological integration in military operations. His emphasis on ethical leadership, strategic thinking, and adaptability resonated deeply with the audience, especially students aspiring to serve in public service, security, or leadership roles.



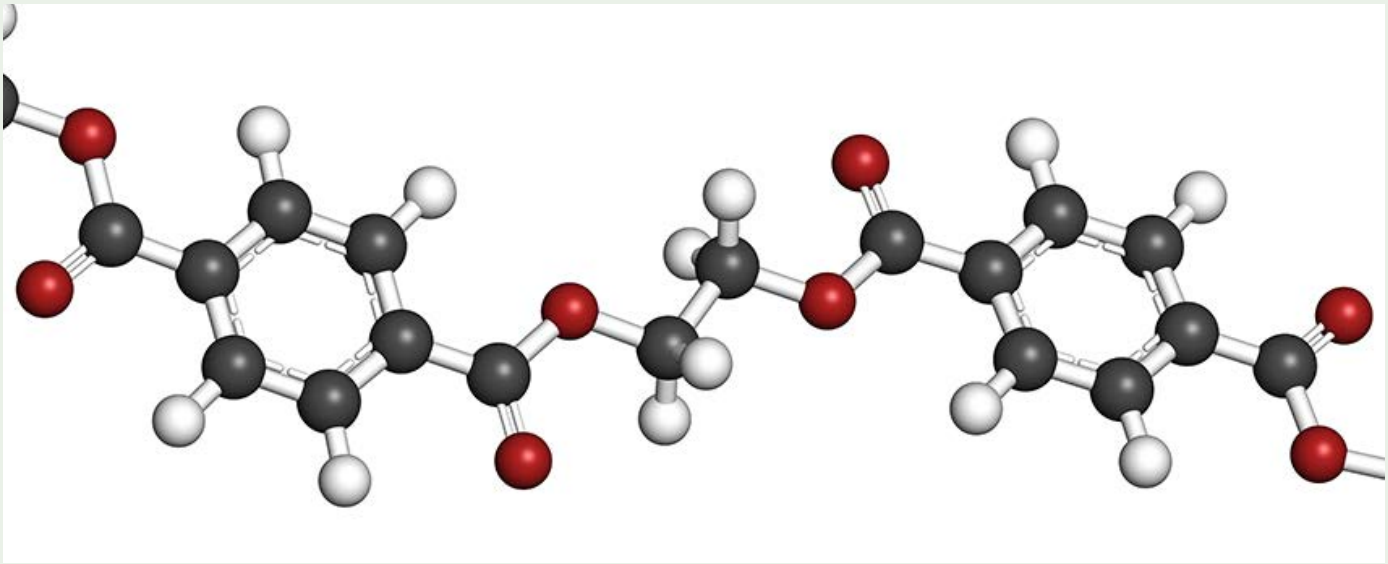
The lecture formed part of DeKUT's ongoing efforts to bridge the gap between academia and industry by exposing students to practical, real-world experiences and perspectives. By engaging thought leaders and experts across different fields, the University continues to enrich its academic programs and promote holistic education.

As DeKUT continues to grow as a centre of excellence in technology, innovation, and leadership, public lectures such as this play a key role in preparing students to contribute meaningfully to national and global development.

Drawing from his distinguished military career and extensive academic background, Dr. Kibochi offered compelling reflections on leadership, decision-making under pressure, logistics coordination, and strategic technological integration in military operations.

BIOCHEMISTRY IN ACTION: THE INDUSTRIAL "EDGE"

By Prof. Esther N. Magiri



The School of Science is poised to roll out a new program, Master of Science in Industrial Biochemistry, which is destined to be a game changer at DeKUT in advancing research and innovation. The big question is, what and how will this program contribute to research, innovation, technology transfer in line with the University's vision, as well as national, regional and global development plans? And more importantly, how could this impact on society?

Biochemistry is a multidisciplinary field with diverse applications in various industries. It is a dynamic field at the cutting edge of contemporary science and industry, providing foundational insights that drive innovation in a variety of high-growth sectors. It forms the basis of biotechnology, driving advancements in multiple fields and serves as cornerstone of modern innovation across various industries. Its importance lies in understanding fundamental biochemical processes, driving advancements in medicine, improving food quality and safety, enhancing agricultural practices, mitigating environmental degradation, and powering innovations in biotechnology.

Biochemistry is a multidisciplinary field with diverse applications in various industries. It is a dynamic field at the cutting edge of contemporary science and industry, providing foundational insights that drive innovation in a variety of high-growth sectors

Coming back home, the MSc in Industrial Biochemistry is well aligned with the ***DeKUT Vision 2040,*** *which is geared towards transforming the Institution into an entrepreneurial University.*

The "edge" of the biochemistry industry is characterized by the integration of technology and a focus on solving global challenges. In the Healthcare industry, Biochemistry is fundamental to understanding the biochemical processes, underlying diseases and consequently plays a crucial role in drug discovery, development, and testing. Application of emerging technologies such as Artificial Intelligence and bioinformatics are accelerating drug discovery and helping researchers interpret vast amounts of biological data. Demand for biochemists in pharmaceutical companies, research institutions, and healthcare settings remains high due to the constant need for advancements in medicine and treatments for various illnesses.

When it comes to the Food Industry, biochemical applications such as enzymatic technologies, fermentation processes, and nutrient enhancement techniques are employed and revolutionizes the industry by improving production efficiency and nutritional value. Biochemists working in nutrition and food science research ways to improve food quality, develop functional foods, and address nutritional deficiencies. As public awareness of the link between diet and health increases, there is a growing demand for biochemists to develop nutritious and safe food products.

In the Chemical Industry, biochemistry enables biocatalysis, the development of biopolymers and bioremediation, fostering sustainable and environmentally friendly solutions that minimizes environmental pollution. In Advanced Manufacturing, for instance, advances in processes like 3D bioprinting for lab-grown tissues and organs are becoming a reality, promising breakthroughs in regenerative medicine. Additionally, there is a growing focus on using biochemical processes to create sustainable industrial materials and green energy solutions, such as engineering microbes to turn waste into energy.

Coming back home, the MSc in Industrial Biochemistry is well aligned with the DeKUT Vision 2040, which is geared towards transforming the Institution into an entrepreneurial University. Systems have been put in place which have created an entrepreneurial ecosystem that promotes the culture of innovation and commercialization. The Master of Science in Industrial Biochemistry in collaboration with other specialized research Centres within the University will greatly contribute to this ecosystem. The programs' innovative nature offers opportunities for biochemists to launch startups focused on cutting-edge technologies and niche solutions at the DeKUT Science and Technology Park.

DeKUT-KFC FILM HUB

WHERE INNOVATION MEETS STORYTELLING: INSIDE THE DeKUT–KFC FILM, ANIMATION AND GAMING HUB

By Patrick Gitonga – HoD, DeKUT–KFC Film Hub

As Dedan Kimathi University of Technology prepares for its 19th Graduation Ceremony on 19th December 2025, the celebrations carry a deeper sense of pride. Beyond academic success, the University marks another milestone — the rise of the DeKUT–KFC Film, Animation & Gaming Hub, a creative powerhouse that has redefined what it means to learn, innovate and tell stories in a digital age. Established in 2020 through a forward-thinking partnership with the Kenya Film Commission, the Hub has grown into one of the country's most vibrant training and production spaces, equipping more than 1,200 young people with industry-ready skills and nurturing a new generation of filmmakers, animators and game developers. For some of the Class of 2025, this is where their creative journey began, making this year's graduation a full-circle moment.

...the Hub has grown into one of the country's most vibrant training and production spaces, equipping more than 1,200 young people with industry-ready skills



Photo: Rapid Skill Bootcamp Session

At its core, the Hub is a world-class platform designed to blend creativity with technology. It offers an environment where students and creative practitioners experiment with film production, 2D and 3D animation, and game development, turning ideas into polished digital works. The facility now hosts dedicated workstations for animation, film editing suites, and fully equipped game development labs — an ecosystem built to help young people craft content that speaks to African experiences and by leveraging emerging technologies in digital media creation—with a niche in educational content while meeting international production standards. It is, quite simply, a space where hands-on learning inspires innovation.

The results speak for themselves. Over 1,200 trainees have gone through the Hub's intensive bootcamps, and close to 80% are now employed or earning through freelance work in the creative sector. DeKUT's presence in national competitions has also surged. Twelve student films have earned nominations at the prestigious Kalasha Awards, with several taking top honours in animation and short film categories. At the 13th Kalasha International Film & TV Awards in 2024, DeKUT made a remarkable showing: The *Carl-Alphabet Game* won Best Gaming, while the *DeKUT Coffee Production Documentary* claimed Best Documentary Short after both jury and public voting.

This momentum continued into 2025 with the completion of the **Satima Cinema Theatre** — a modern, fully equipped screening and exhibition space that will be officially launched soon in partnership with the Kenya Film Commission. Once operational, Satima Cinema will host film premieres, public screenings, cultural events and creative showcases for both the University and the wider Mt. Kenya community.







This momentum continued into 2025 with the completion of the Satima Cinema Theatre – a modern, fully equipped screening and exhibition space that will be officially launched soon in partnership with the Kenya Film Commission.

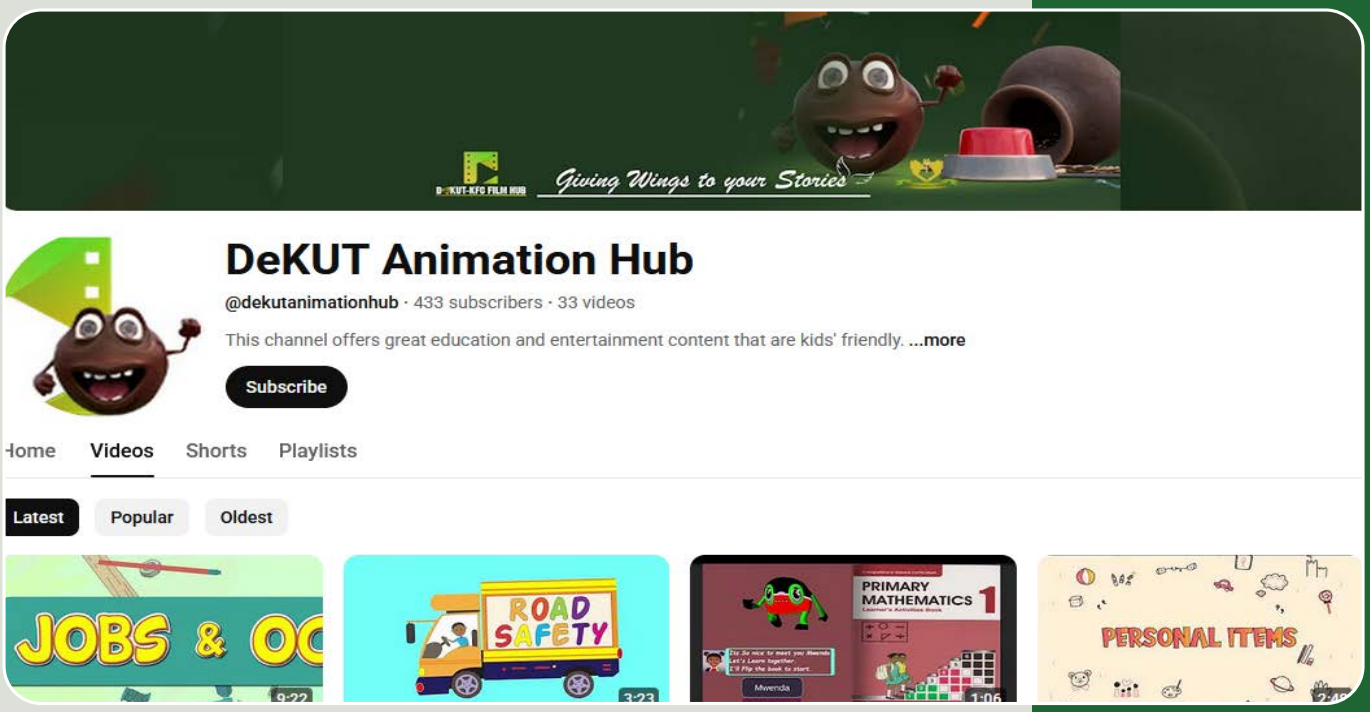
The Hub also played host to one of the year's major cultural highlights: the European Film Festival – Campus Edition. DeKUT welcomed distinguished guests, including H.E. Ondrej Šimek, Deputy Ambassador of the European Union, and Ms. Marie Ottosson, Head of Development Cooperation at the Embassy of Sweden. The festival brought together screenings, a student-led pitching workshop, and a dynamic panel discussion on storytelling and its social impact, giving students a front-row seat to global perspectives.

Looking ahead, the DeKUT–KFC Film Hub is poised for even greater impact. Working closely with the Kenya Film Commission, the Hub is scaling up its capacity-building programmes, preparing regular public screenings at Satima Cinema and expanding support to creative startups through incubation and mentorship. Plans are underway to strengthen industry linkages, enhance service-based revenue streams such as post-production services, and introduce short courses by offering short courses in Animation, Film Production & Visual Effects for emerging professionals.

As we celebrate this year's graduates, the Hub stands as a testament to what can happen when a university dares to merge technical expertise, creative ambition and strong partnerships. It is more than a collection of studios and equipment; it is a catalyst for jobs, innovation and authentic African storytelling.

It is more than a collection of studios and equipment; it is a catalyst for jobs, innovation and authentic African storytelling.

Some of the students graduating this December will walk away not only with degrees, but with portfolios, practical experience and confidence shaped within this unique space. And long after the graduation gowns are folded away, their stories, crafted here at the DeKUT–KFC Film Hub, will continue to travel, inspire and define Kenya's place in the global creative landscape.





CRITICAL THINKING: THE BASE FOR THE MINOR DEGREE IN DeKUT

By Prof. Theuri. M. M., PhD,
Director, Institute of General Studies

The teaching of the common units is a universal concept across the universities. These common units, which include philosophy, sociology, governance, communication skills, Egyptology, history, and many other units depending with individual university and its orientation, are the support base for the other core units either in technology, humanities and social sciences. The award of the **Minor Degree in Critical Thinking and Communication Skills** at Dedan Kimathi University of Technology (DeKUT) is therefore founded on this philosophy that despite it being a University of technology, there are other subsidiary units that the students are supposed to take in enhancing their skills as well as a specific unit in their core areas. Thus, every graduate leaving DeKUT has a **Minor Degree** on top of her or his core degree. A few words on this achievement are important.

Education wise, DeKUT is founded on the expectation that it will train, examine and produce engineers as well as other scientists specifically in technology. Until December 2012, this University was a constitute college of Jomo Kenyatta University of Agriculture and Technology (JKUAT) but now, it is a fully-fledged university bearing its Motto "*Better Life Through Technology*". Like any other university in Kenya and beyond, DeKUT took its mandate in stride and has worked hard in all its graduations to give to the world the all-rounded graduates.

Thirteen years would appear to be too early to compare DeKUT with the world-wide universities like MIT, Oxford or Carnegie Mellon, where technology has grown to its best. Nevertheless, the faculty at DeKUT is from some of these best universities across the globe and they have been working very hard and diligently to be at par with their colleagues globally. Though the School of Engineering is the main driver at DeKUT, other schools and institutes have worked hard to make the technological knowledge more appealing to the over eight thousand students joining this University. Interestingly though, technology would have been incomplete without the human face gotten from humanities and social sciences. It is this urge that made DeKUT to establish not only the School of Business Management and Economics, and under its umbrella, a Center of Philosophy and Communication Skills, which is today the Institute of General Studies, and from where philosophy and critical thinking are promoted through case studies, debates and discussions, problem-based learning, and most importantly high level of communication skills across the units offered.

Through the **Institute of General Studies**, units in humanities and social sciences are offered to the extent that all graduates from DeKUT earn a Minor Degree in addition to their core degree after their specific year of study. This has been the norm since the establishment of the **Institute of General Studies in 2020** which services all the departments and other directorates at DeKUT. The entry to this degree is through the key unit, the **Introduction to Philosophy and Critical Thinking** which is a common course taken by all the first-year undergraduate students registered in DeKUT before any other unit. This unit is purposely designed to assist the learner in articulating life issues in a critical, ethical

and realistic manner which enables one to be a responsive, accountable and transparent citizen. Thus, the unit brings about the philosophical and critical mind that appreciates the necessity of a reflective, innovative and nation cohesion-oriented individual. As one goes through this unit, he or she becomes a value driven individual whose desire is to build, educate and transform the society in a wider manner.

Being a common unit, **Introduction to Philosophy and Critical Thinking** is mandatory to all the students and is designed in such a way that it enhances holistic education and promotes decision making skills, thus equipping the learners with knowledge and ability of becoming transformative agents in society and appreciation of their continuous transformation in their character and lifestyle. By studying this unit and many other units in the Institute, one gains the wider knowledge of national values and cohesion, thus enabling them to identify the problems that affect not only the individual but also humanity, thus empowering them to be part of the solutions as envisaged in the Kenyan Constitution.

Introduction to Philosophy and Critical Thinking unit therefore makes a student to embrace a unique culture which is critical and value driven in as they begin their academic life. To this end and in order to achieve its objective, the unit is Competent Based in Assessment (CBA) with 60% practical in basic parameters assessed through various assignments, debates, online continuous assessment as well as a physical sit-in examination covering the entire critical components of a university product. The impact and the significance of teaching and enlightening the learners on critical thinking is hoped to yield philosophical and educational thought processing required in bringing an innovative, creative and vision driven individual in Kenya and beyond.

It is crucial for university graduates to think critically particularly in this era of artificial intelligence, thus enabling them to filter through what is true or false as there is too much information that is in the field that requires thorough and critical abilities away from the technical and artificial knowledge. Furthermore, the knowledge outside there requires a disciplined and reflective mindset, enabling individuals to sift through information, identify biases, and recognize logical fallacies.

In educational and professional settings, critical thinking is highly valued as it empowers individuals to solve complex problems, make informed decisions, and adapt to rapidly changing circumstances. In the workplace, employees with strong critical thinking skills will always be better placed in navigating through challenges thus enabling them to contribute innovative ideas with clear communicative skills not only with the colleagues but also with the outside world. Thinking critically enables individuals to make healthy, informed decisions based on facts rather than faulty assumptions, thus, they are able to think about how often they make decisions that can lead to productive and non-corrupt individuals for the society. Success in your personal and professional life depends on strong critical thinking abilities. So, how do you improve your critical thinking? Here are some ways that can help you become a better critical thinker. Collectively, these reasons illustrate why this skill is so valuable in everyday situations. This is the philosophy behind the establishment of the **Institute of General Studies,** where graduates acquire that which is not necessarily gotten from the world of technology.



RETIREMENT – DOES IT HAVE TO BE BORING?

By Prof. Nicholas Mariita

Retired GeTRI Director

We all must retire one day. Most people define *retirement* as that stage in life when one chooses to leave the workforce and live off sources of income or savings that do not require active work. The age at which a person retires will vary from one person to the next, depending on individual preferences, but it is often dictated by the regulations. Some individuals may opt for early retirement to enjoy their hobbies and travel, while others may continue working part-time, depending on their health status, or stay engaged and supplement their income. Effective retirement planning often involves a combination of savings, investments, and possibly compulsory pension benefits to ensure a comfortable and secure post-work life. The standard retirement age is between ages 60 and 70, but everyone has to decide for themselves exactly when, and if, they will stop working. What one's retirement looks like will depend on many factors, each unique to one's personal situation, the number of years one will have worked and one's health.

In general, *retirement* is the time of life when one no longer needs to work to live comfortably, and can rely on savings or passive forms of income to fund one's lifestyle.

Retirement and the term "financial independence" are often used interchangeably. Both are achieved when one has enough combined savings, investment income, and/or pension income to cover one's living expenses.

Challenges to a Good Retirement Plan

Retirement is not without its challenges. One of the biggest decisions one has to make is when to retire. Another is how much to spend in retirement. One also has to decide when to start taking *pension* and frequency of receipts. There is no single shilling figure to cite that will work for everyone's retirement. Funding one's retirement will depend on many factors, such as the age at which one plans to retire, one's life expectancy, one's projected cost of living during that time. This requires a personal financial assessment. To achieve retirement, one needs to plan and save accordingly. It is best to start saving as soon as one gets employment and put away at least 10% of one's income each year. If one starts saving late (in one's 40s and 50s), one will have to save a larger portion of one's income — maybe as much as 50% a year. One can save in a number of ways including employer-sponsored retirement.

Other perks include tax-advantaged treatment. The idea behind putting aside funds to save for retirement is that one can take advantage of the specific benefits each account offers, as well as the time value of money to earn interest on one's contributions, to grow one's earnings over time. The earlier one starts to save, the more one will benefit. That can involve increasing the savings above that are required by the employer, i.e., voluntary deductions.

Unfortunately, many people, however, are unwilling to make the lifestyle changes they would need to save enough to afford a comfortable retirement.

In one's retirement, one is faced with too much free time in one's hands. Retirement from the workforce does not have to be boring. It offers a chance to reconnect with one's greatest passions and most important goals — it all depends on what one chooses to do in one's retirement. Retirement is the time to make a difference, to assess the meaning and value one has for other people. Then prioritize doing what matters most. One can try new experiences, develop new skills, and devote more time to society and hobbies one loves, including voluntary work. As one prioritizes the things that matter, one will naturally find that there's less time for one to squander on the more mundane or workaday items. It's all up to an individual. As a retiree, one no longer has to deal with work-related deadlines; one is free to have fun and do what one wants, on one's own terms. During a person's working years, leisure often means relaxing and getting away from structure. But in retirement, it's more about engaging in activities and connecting with people. Volunteering gives one a sense of purpose and lets one contribute to a greater good, by identifying the types of organizations one is interested in and seeing if they could use one's abilities. Almost one-quarter of retirees volunteer on a regular basis, according to some studies. Sharing one's expertise can be a very fulfilling way to give back. For example, becoming a mentor to a young person lets one act as both a teacher and a coach and make a positive difference in a kid's life.

10%

...put away at least 10% of one's income each year.



WAKATI WETU FESTIVAL – IT'S OUR TIME FOR REPARATIONS

By Prof. Yoporeka Somet,
Centre for African Renaissance Studies

On behalf of the Centre for African Renaissance Studies, I was invited to give a talk at the first *WAKATI WETU FESTIVAL on Reparations*, organized in Nairobi from 22nd to 23rd October 2025. The theme of the panel was: "***To what extent are slavery, colonial injustices, and systemic racism discussed in the public sphere in Africa?***"

My contribution was as follows:

First of all, I would like to express my gratitude to the organizers of this Festival on Reparations for slavery, colonialism, and systemic racism against black people in the world, for the initiative they have taken and for their efforts to bring such a historical, social, and political problem into the public sphere, on our continent.

It is also fortunate and very encouraging that this initiative comes from civil society, particularly from the youth. But more needs to be done: these stories of domination, theft, looting, and racism for centuries need to be taken into classes, learning institutions, colleges, and universities across the continent.

We have such a program at Dedan Kimathi University of Technology in Nyeri. It includes the Origin of Technology as well as the Invention of Fire and Metal Work, the Domestication of Crops and Animals, the origin of disciplines like Philosophy, Literature, Mathematics, Governance, and last but not least, the Invention of Writing, in the middle of the fourth millennium BCE, in the upper Nile Valley, in Africa.

The fact that this *WAKATI WETU FESTIVAL* takes place here in Nairobi, Kenya, in the original land of our ancestors, is another reason to insist on the fact that this event not only addresses Kenyans or East African citizens, but the whole of the African Continent and the rest of the world. That should be known worldwide.

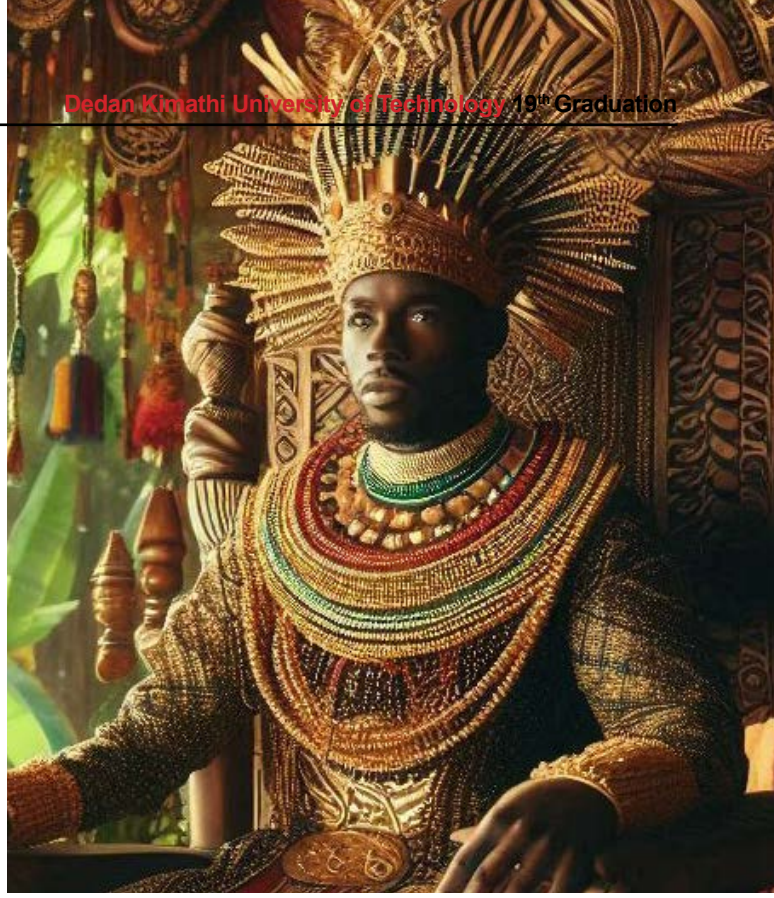
We all know that Africa is the cradle of humanity. Our continent is also the cradle of rationality as well as the cradle of the first human civilizations. Various scholars have provided evidence on that, in particular, the Senegalese scientist, historian, and Egyptologist **Cheikh Anta Diop**, in his work ***The African Origin of Civilization***.

It is this historical truth that the proponents of slavery, colonialism, and domination have strived to erase from African consciousness and human memory. At least, this is one of the direct consequences of slavery, colonization, and systemic racism.

We talk about **systemic** racism to emphasize the fact that racism against black people has been generated by a system, not mere individuals, as a *posteriori* justification of slavery, colonialism, and domination.

We must not only heal ourselves from the damages caused to us, but we also need to assess the extent of the prejudice on our continent, to the African people and the people of African descent around the world, and finally consider how and by whom all these wrongs should be repaired.

With the direct conquest of the African continent during the 19th century, after the abolition of slavery, as a Ghanaian historian put it, "*a forcible possession of our land has taken the place of a forcible possession of our persons.*" (Albert Adu-Boahen). And this too was followed by a rather *free possession of our minds*.



In consequence:

- This has drastically affected our societies and undermined our past, resulting in the erasure of our cultural and intellectual memories. In comparison, let me take you back to how our Nilotic ancestors related to the past, in their time:
  - King **Piankhy** (747-716), a famous Kushite Pharaoh, has adopted the same royal name (**Menkheperre**) as his predecessor **Thutmosis III** (1504-1450), who ruled Kemet (ancient Egypt) 750 years earlier. His brother and successor, King **Shabaka** (716-702), did the same and took the name of a king (**Neferkare**), who ruled the kingdom 1760 years before him!
  - In her autobiography, Queen **Hatshepsut** (1498-1483), who succeeded her husband Thutmosis II, recounts her divine birth (how her mother, Ahmose, was impregnated by the God Amun), which was inspired by an older story, a thousand years before. This founding myth (at the origin of divine kingship) is that the semen of the Sun-God Ra conceived the following triplet brothers and kings: **Userkaf** (2498-2491), **Sahure** (2491-2477), and **Neferirkare** (2477-2467), also called **Kakai** (a name still in use among the Wayamba).
- It has also compromised our present (instability of our societies and institutions, violence, inequalities, poverty, etc.) Here again, in comparison, the people of Kemet did not borrow their models from outside. Instead, they relied on their traditional values, one of which was called **Maat** (truth, justice, balance, solidarity, equality, equity, etc.), represented by a scale, the symbol of justice up to date. They never practiced forced labor, not to mention slavery. Thus, the pyramids and other great monuments were built by free workers,

In conclusion, we need to heal ourselves first to be able to reconnect with our history and memory. This requires we free ourselves from colonial mentality, as Ngugi Wa Thiong'o recommended in his seminal work, Decolonizing the Mind.



highlighting the importance of freedom and human dignity (cf. Mark Lehner, ***The Complete Pyramids. Solving the Ancient Mysteries***). Moreover, they did not have prisons and never practiced the death penalty. They had great respect for human beings, also referred to as the "noble cattle".

- Finally, it has disrupted our projection into the future. Today, in Africa, we lack examples of common or national projects spanning over 20 to 50 years. This means that our horizon, as a nation, is quite minimal: no more than 4, 5, or 7 years, when elections are organized.
    - In contrast, we know that the construction of the Great Pyramid of King Khufu (2589-2566) at Gizeh took at least 20 years to be completed.
    - In the same vein, we can recall the story of magicians from Kush and Kemet challenging each other to take revenge over a period not less than **1460 years**, which is a complete "Sothic cycle" in their calendar (365 x 4), that we inherited.

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In conclusion, we need to heal ourselves first to be able to reconnect with our history and memory. This requires we free ourselves from colonial mentality, as Ngugi Wa Thiong'o recommended in his seminal work, ***Decolonizing the Mind***.

So, let's UNITE and reconnect with our HISTORY. Let's HEAL ourselves so that we can stand for our rights and defend ourselves against colonial injustices, domination, and systemic racism. Let's COME TOGETHER, talk to ourselves and then to the rest of the world with ONE voice. That is possible, and that is in our hands.

Africa, we lack examples of common or national projects spanning over 20 to 50 years. This means that our horizon, as a nation, is quite minimal: no more than 4, 5, or 7 years, when elections are organized

IGNITING TOMORROW'S LEADERS: THE LAUNCH OF THE YOUNG LEADERS CLUB AT DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY

By Dr. Diana Njuguna



In another remarkable achievement showcasing the club's international reach, one of our members, Laureen Wangechi, BSc. Nursing, was able to attend the 3rd Edition of the International Young Leaders Camp (October 2025) held in Uganda, where she was able to connect with Young Leaders across Africa.

The newly formed Young Leaders Club at Dedan Kimathi University of Technology is already setting the stage for transformative opportunities for its members. Under the patronage of Dr Diana Njuguna, the club has quickly attracted a dynamic group of young women eager to begin their leadership journeys. As part of the Kenya Girl Guides Association (KGGA) and a member of the World Association of Girl Guides and Girl Scouts (WAGGGS), the club offers a strong platform for personal and professional growth for girls and women. Since its establishment in Kenya, the Young Leaders Club has focused on providing its members, young women aged 18 to 35, with a diverse array of activities. These include sports, community service, and cultural exchange, which are key to building



confidence, life skills, and global awareness. With mentorship from KGGA, members are encouraged to explore their potential, make meaningful contributions to society, and connect with young leaders across Kenya and beyond. The club's affiliation with KGGA and WAGGGS means it is well positioned to offer members access to leadership training, national and international networking, and service projects that address pressing community needs.

One of our members Clare Koigi, BSc. Information Technology is a Gender Equality Badge (GEB) Youth Ambassador, joining a team of young changemakers driving equality across the world! These young women are inspiring action, amplifying girls' voices, and supporting KGGA to bring gender equality to life in their communities. As an ambassador of the GEB, Clare will receive a small grant facilitated through KGGA to support her activities, gain access to official toolkits and resources, receive mentorship from WAGGGS and programme partners, network with fellow Ambassadors worldwide, and enjoy recognition through features on WAGGGS's communication platforms.

In another remarkable achievement showcasing the club's international reach, one of our members, Laureen Wangechi, BSc. Nursing, was able to attend the 3rd Edition of the International Young Leaders Camp (October 2025) held in Uganda, where she was able to connect with Young Leaders across Africa. This participation is vital as it provides Laureen with an invaluable opportunity to share cultural insights, exchange best practices in leadership and community service, and build a powerful, continent-wide network that will amplify the impact of her work back at Dedan Kimathi University of Technology.

The guidance of the club patron ensures that the club's values of trust, loyalty, and service are woven into every activity. This new club holds extraordinary potential for empowering young women at DeKUT to become innovators and changemakers, both locally and on the world stage. As the newest addition to the University's vibrant roster of clubs and societies, the Young Leaders Club promises to shape confident, community-minded leaders prepared to seize opportunities and leave a positive legacy.

ERASMUS+ MOBILITY GRANT FOR POLYMER TECHNOLOGY

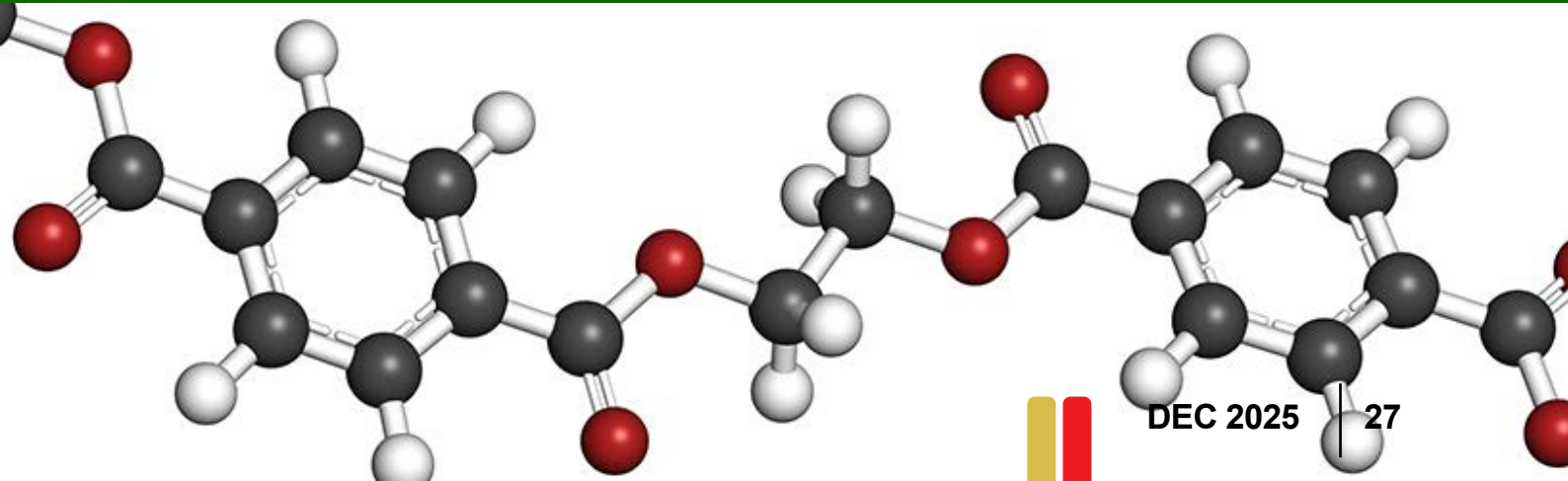
By Dr. Onyancha
Dean, School of Graduate Studies and Research

Dedan Kimathi University of Technology offers a program in Polymer Science. Polymer Science is concerned with synthesis, structure, properties and applications. Polymers have widespread applications in our lives ranging from textile cookware, automobile aviation and agriculture among others.

In the spirit of offering world class curriculum that meet international standards as a university of technology, the University has leveraged on Erasmus+ mobility grants to enable students to travel abroad for six months to learn, take practicals and industrial visits in a country leading in polymer technology.

DeKUT has partnered with Johannes Kepler University (JKU) in Linz Austria, in the year 2024/2025. Five (5) MSc students from Mechanical, Chemical Engineering, and Chemistry with projects in polymer materials benefited from the Mobility. This is a fully funded Mobility which covers airfare, accommodation, tuition fee at host university and upkeep. The funding is provided by the European Union and it provides opportunities for students from developing countries to visit abroad for academic exchange. This will foster technology transfer and diffusion. The opportunities are also available for staff. The purpose in addition is internationalization and harmonization of curriculum across the globe. The second phase of the Mobility will take place in 2025/2026. A total of 4 students will have the opportunity to spend 6 months at JK Linz studying polymer. Further Mobilities are lined up to 2027.

This collaboration with an international university clearly demonstrates the effort of DeKUT to expose student to international experience, which is a pivotal role in internationalization and also making the student fit for global market. In addition, it demonstrates the effort to align our curriculum to international standard so as to attract international students.



DeKUT'S UNESCO CHAIR RENEWED: BIGGER, BOLDER, AND POISED FOR GLOBAL IMPACT

By Ms. Lucy Kinyingi

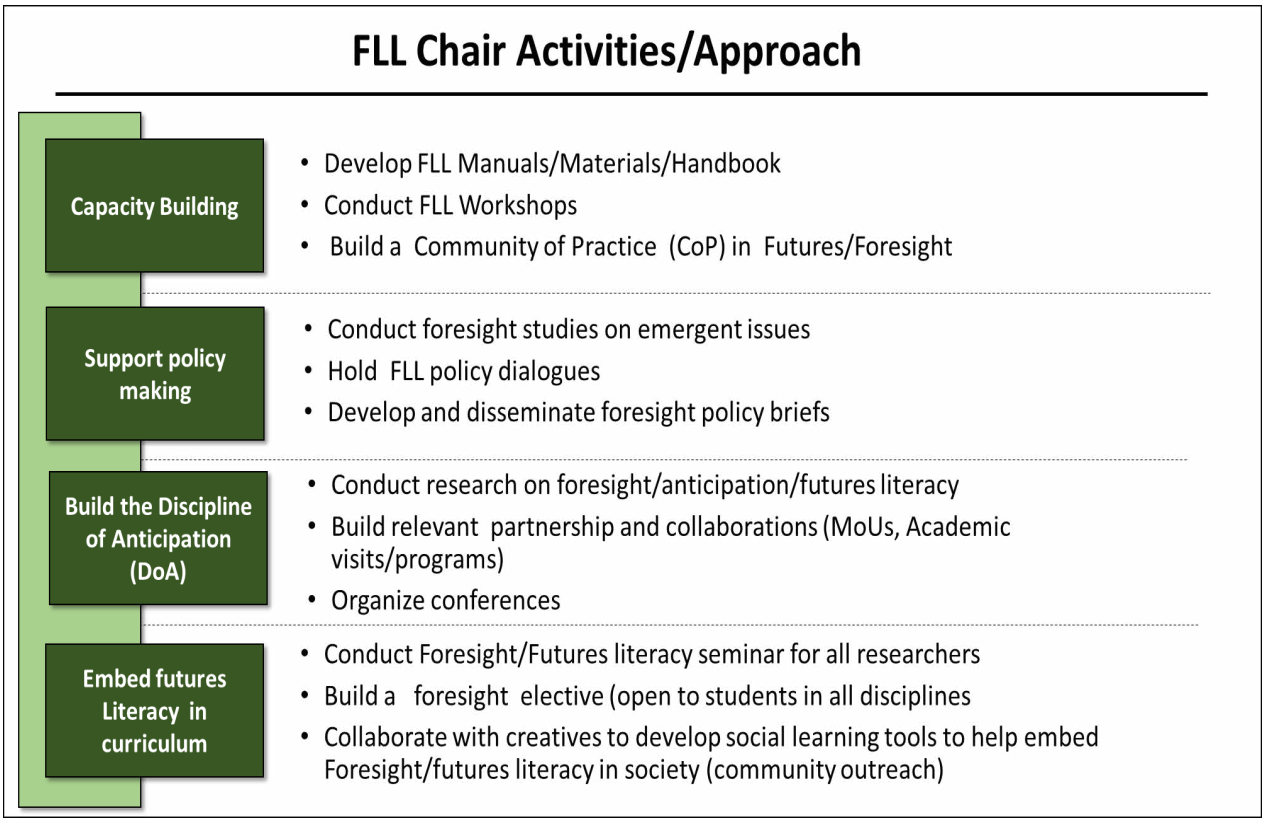
HoD, IOA and UNESCO Chair Administrator



In December 2021, DeKUT, through a highly competitive process, was awarded the prestigious UNESCO Chair in Futures Literacy, the first of its kind in Africa. Since then, additional Chairs in Futures Literacy have been established across the continent. In her proposal, DeKUT identified four strategic thrusts to guide the activities of the Chair:

a) Building future capabilities and a strong Community of Practice (CoP) in the field of futures literacy and foresight;
b) Supporting policy-making;
c) Advancing the Discipline of Anticipation through research and collaboration with other UNESCO Chairs;
d) Embedding Futures Literacy in education systems.

The Chair was initially awarded for a four-year term ending in December 2025, after which the University was expected to reapply by demonstrating the achievements made in line with its original proposal. We are pleased to note that during the renewal process, UNESCO recognized that the DeKUT UNESCO Chair had



shown strong alignment with the UNITWIN/ UNESCO Chairs Programme through impactful research, training, and partnerships in foresight and futures literacy. The Chair's integrated approach and extensive collaboration at both national and international levels were also highly commended. As a result, the Chair has been renewed for an additional four years, up to December 2029. This renewal comes with a strategic partnership with Maastricht University in the Netherlands, with Prof. Diederik de Boer joining as the Co-Chair.

Key highlights from the Chair's activities include:

a) **Capacity building and academic courses:** Delivery of a six-week short course on Strategic Foresight Capabilities, now essential for current and aspiring managers; and integration of a Foresight module in the Master of Innovation and Entrepreneurship programme;
b) **Training programmes on strategic foresight:** Sessions addressing topical issues such as the future of work and youth, building a futures-literate society, reimagining innovation, Industry 4.0 and the futures of industrialization, Foresight for Food Systems Change in Africa, and the Future of Dairy, among others;
c) **Support for policy-making:** Contributions to key initiatives including the development of DeKUT Vision 2040; *Nigeria: Imagine the Future*; expert panel discussions on *The Future of Work in Africa*; SADC Futures of Industrialization; and the *Disruptors and Enablers of Research for Development (R4D)* Kenya Foresight Workshop;
d) **A vibrant Community of Practice:** Comprised of members committed to engaging in foresight activities and who have successfully completed a three-day training-of-trainers programme in futures literacy.



Why Futures Literacy at DeKUT; A renowned University of Technology

Futures Literacy enhances STEM programmes by equipping learners with the ability to anticipate, imagine, and explore multiple possible futures, rather than relying solely on linear projections of current trends. STEM fields—science, technology, engineering, and mathematics—are deeply intertwined with rapid technological change and complex global challenges such as climate change, pandemics, and digital transformation. By integrating futures literacy, students are encouraged to critically question assumptions, identify emerging signals of change, and understand the broader social, ethical, and environmental implications of scientific and technological advancements. This empowers them to become proactive problem-solvers who can navigate uncertainty and design solutions that remain relevant in dynamic contexts.

At the same time, STEM programmes provide the analytical, computational, and experimental foundations needed to make futures literacy actionable. While futures literacy strengthens imagination and anticipatory capacity, STEM disciplines supply the tools to test scenarios, model systems, and innovate tangible solutions. When combined, the two cultivate a holistic learning environment where students not only envision diverse future possibilities but also develop the technical expertise to influence those futures responsibly. This intersection promotes a new generation of researchers, engineers, and scientists who are not just technically competent but strategically aware, contextually grounded, and capable of shaping inclusive and sustainable futures.

Going forward, the Chair invites you to participate in its quarterly public seminars on key topical issues, as well as in the futures literacy courses, workshops, and conferences that will be rolled out. For real-time updates on these and other activities, please visit our website and connect with us on our social media platforms, including LinkedIn, X (formerly Twitter), and Facebook.

INNOVATION IN ACTION

By Dr. Ollengo Moses
Director, RIMCL



Performance of Financially Independent Centres Q1 2025

Dedan Kimathi University of Technology showcases breakthrough achievements across research, innovation, and community impact.

Leading the Charge in Innovation

Dedan Kimathi University of Technology continues to solidify its position as a premier hub of research and innovation through its dynamic Financially Independent Centres (FICs).

In the first quarter of 2025, these centres demonstrated remarkable progress in securing funding, driving technological advancements, and creating tangible impact across various sectors.

Our Impact by the Numbers

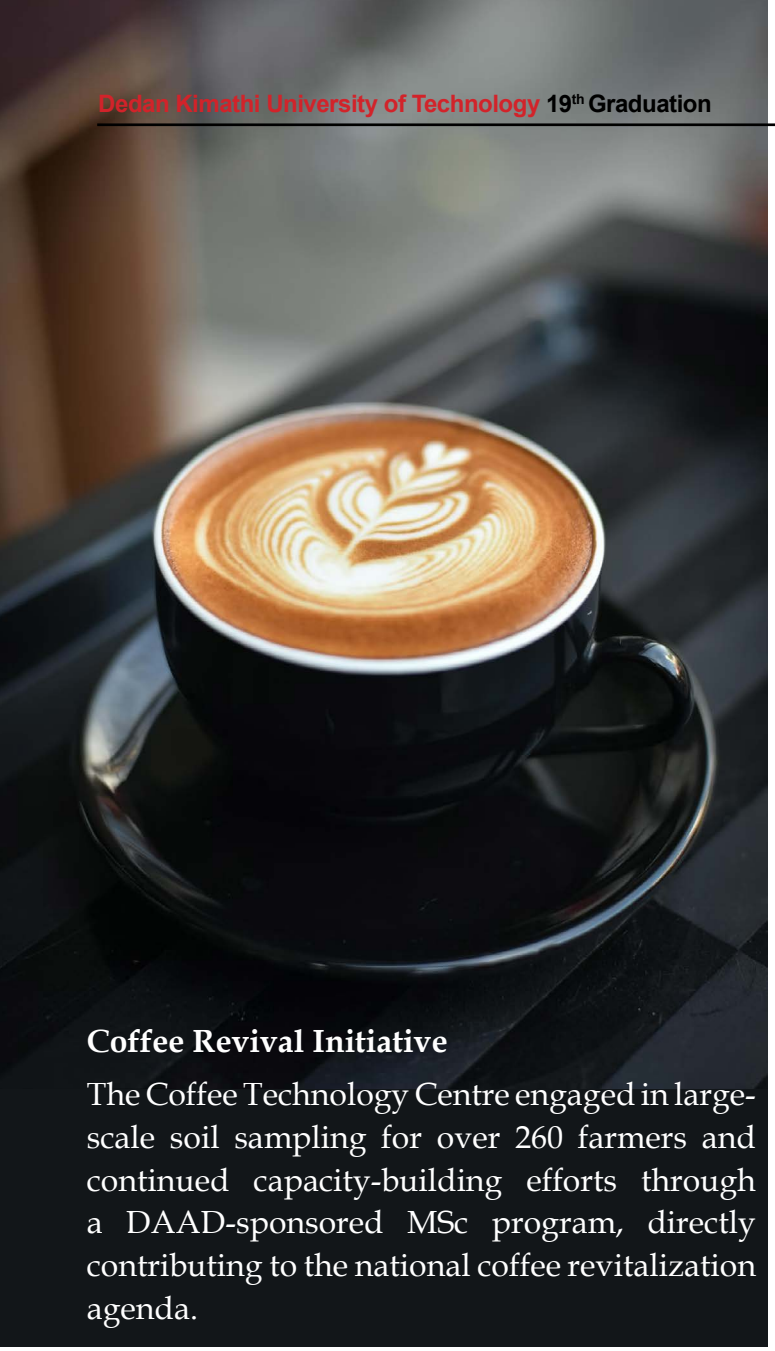
- 20+ Active Research Centres Driving innovation across multiple sectors;
- 260+ farmers supported through soil sampling and capacity building;
- 30 Industry 4.0 trainees Selected for advanced skills development;
- 100% commitment to impact creating solutions for society.

Transforming Agribusiness and Food Technology

CeFoNa Launches Startup

The Centre for Food Safety and Naturopathy made significant strides by launching Afyalishe Wellness Ltd, commercializing research into healthy food products. The Centre also actively advanced its integrated Chia and Oyster Mushroom system project.





Coffee Revival Initiative

The Coffee Technology Centre engaged in large-scale soil sampling for over 260 farmers and continued capacity-building efforts through a DAAD-sponsored MSc program, directly contributing to the national coffee revitalization agenda.

Pioneering Health and Biomedical Solutions

Robotics for Accessibility

The Centre for Robotics and Biomedical Engineering developed a robotic wheelchair controlled by bio-signals, making progress in PCB fabrication and AI model development. Their findings were published in a reputable international journal.

Health Research Excellence

CHeRi secured a pilot project on household energy and cardiovascular health from Emory University, USA. The Centre also laid groundwork for significant projects in cervical cancer screening and AI for public health.

Engineering Industrial Excellence

Centre for Industrial Productivity

The DeKUT Centre for Industrial Productivity and Engineering (CIPE) successfully completed two projects with industry partners and planned several academic trips for students to enhance practical learning.

Mechanical Engineering Design

The Centre for Mechanical Engineering Design (CMD) completed the "KeFRI Cone Tumblers" project and initiated several new agricultural machinery projects, including:

- Fodder chopper systems;
- Oil extraction machines;
- Collaborations with local farmers and enterprises.

Leading the Digital Revolution

Siemens Mechatronics

Achieved major milestones in the SIFA project, selecting and sensitizing 30 trainees for Industry 4.0 skills and developing standardized digital training manuals for the Metaverse.

Data Science & AI

Demonstrated strong academic output with

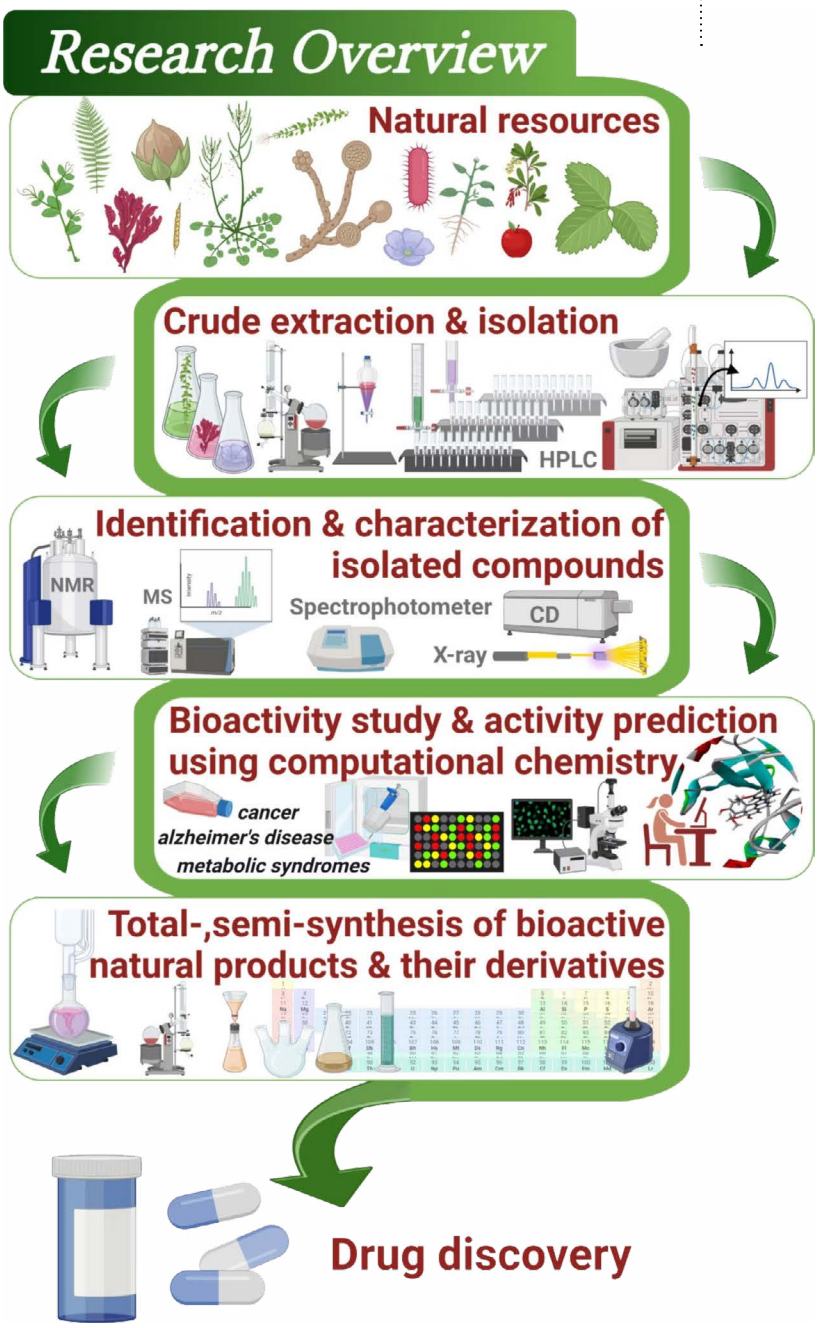


MSc and PhD student progress, submitted high-value grant proposals, and hosted a foundational machine learning course with a professor from the University of Cambridge.

Nurturing Entrepreneurship and Creative Arts

Startup and Incubation Centre

Energized the entrepreneurial spirit by hosting a design thinking hackathon and student pitching session, nurturing numerous projects at the ideation, R&D, and prototyping stages.



DeKUT-KFC Film Hub

Promoted creative arts by hosting the European Film Festival and progressing with production of a 3D animation film, *"Wambui the Shujaa,"* which celebrates environmental legacy.

Championing Environmental Sustainability

Natural Products Research Centre

NAPREC advanced its **"Ongataki project"**, successfully treating chrome effluent from leather tanning and engaging with industry for potential technology uptake.

Showcasing a strong commitment to environmental sustainability and industrial partnership for cleaner production methods.

Shaping Tomorrow's Innovators

Academic Excellence

Contributing to the academic prestige of DeKUT through cutting-edge research and innovation.

Next-Gen Training

Training the next generation of innovators and problem-solvers ready to make their mark.

Community Impact

Playing a crucial role in creating tangible solutions for society's most pressing challenges. The collective output from the FICs in Q1 2025 reflects a University at the forefront of applied research, innovation, and community engagement.



DeKUT WILDLIFE CONSERVANCY: A NEW DAWN FOR CONSERVATION AND LEARNING

By Prof. Fredrick Waweru and Dr. Leanard O. Juma

The 19th graduation coincides with a significant milestone in DeKUT's commitment to environmental stewardship, with the most successful conservation exercise in the Dedan Kimathi University of Technology Wildlife Conservancy (DeKUTWC) history. The arrival of a total of 39 animals, including the endangered reticulated giraffe, enhances DeKUTWC's role as a vital living laboratory for future conservation leaders, tourism managers and researchers.

The DeKUTWC: A Living Lab for Future Leaders in Tourism and Biodiversity

The DeKUT Wildlife Conservancy, spanning approximately 126 acres of indigenous forest, was purposefully established to serve a crucial dual function: biodiversity conservation and experiential learning. Functioning as a premier training and conservation education centre, DeKUTWC provides invaluable hands-on experience, particularly for students enrolled in the Institute of Tourism and Hospitality Management (IToHM), as well as those pursuing environmental and natural resource degrees. Its establishment has ensured the protection of diverse indigenous flora and fauna, including existing populations of impalas, Sunis, waterbucks, zebras, and warthogs, while offering a unique, natural environment for essential ecological research and community engagement activities. This direct involvement allows students to apply theoretical knowledge to real-world conservation challenges, ensuring they graduate as well-equipped professionals ready to tackle Kenya's intricately intertwined wildlife conservation, tourism and hospitality issues.

The Successful Translocation: A Conservation Triumph and Genetic Rescue

In a landmark exercise facilitated by the Kenya Wildlife Service (KWS), a total of 39 animals were successfully translocated to the DeKUTWC from the Ol Pejeta Conservancy. This complex, and highly coordinated operation was completed successfully between Thursday, July 17th, and Monday, July 21st, 2025. The Management and the entire DeKUT community conveyed profound gratitude for the generous donation, which significantly boosted the conservancy's biomass and genetic health. The translocated animals included: five reticulated giraffes, ten common zebras, fifteen impalas and nine warthogs. This translocation is crucial for a number of reasons. First, it will play a pivotal role in mitigating the adverse effects of inbreeding (genetic depression) previously observed in the existing populations of impalas, common zebras, waterbucks and warthogs. This genetic rescue will enhance their vigour, health, and fertility. Furthermore, it will substantially enhance the ecological biodiversity of the conservancy, strengthening its capacity for teaching and training across Nyeri County and its environs, providing a richer learning resource for future students.

Indeed, as a sign of good tidings and a robust testament to the viability of the conservancy as a breeding ground, a total of seven (7) new births has been witnessed since July this year at the DeKUTWC. This includes a female giraffe calf, three impala calves, two waterbuck calves and one Llama calf.

The recent translocation of the reticulated giraffe is particularly significant given the alarming conservation status of the species globally. Endemic to the North and North Eastern Kenya, the reticulated giraffe is listed as 'endangered' on the International Union for the Conservation of Nature (IUCN) Red List, with little proactive conservation programmes. This alarming classification reflects a huge population decline, estimated at 50–56% over the last three decades. Once numbering around 36,000 individuals, the population has dwindled dramatically to approximately 16,000 today. This sharp decline is largely due to poaching, rampant habitat loss, and fragmentation caused by human population growth, infrastructure development, and livestock encroachment into traditional giraffe ranges. This is unlike its relatives the Maasai giraffe with a better conservation status and have a greater distribution range south of the equator. The Rothschild giraffe on the other hand, despite being critically endangered, many efforts and programmes are in place for its conservation.

In this regard therefore, by providing a secure, managed home and breeding ground for the reticulated giraffe, DeKUTWC is actively joining national efforts to reverse the declining numbers of this threatened species. The University's commitment goes beyond mere sheltering; it focuses on rigorous research, training, and awareness creation to foster long-term conservation solutions for the reticulated giraffe.

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This includes a female giraffe calf, three impala calves, two waterbuck calves and one Llama calf. These births have increased the conservation numbers and mark the successful beginning of a vibrant new era for wildlife at DeKUT, promising a sustainable future for the conservancy and its role in Kenyan wildlife education. Other services offered at the DeKUTWC include conferencing, bush dinners, accommodation cottages, camping, and game viewing

Congratulations to the graduating class of 2025, and you are welcome to visit the DeKUTWC





IGNITING THE FUTURE: STUDENT INNOVATION AS THE HEARTBEAT OF DeKUT'S TRANSFORMATION

By DeKUT Startup and Incubation Centre (DeSIC)

Dedan Kimathi University of Technology has long been committed to nurturing a culture of innovation and entrepreneurship across its students, faculty, alumni, and the wider community. Central to this mission is the **Dedan Kimathi Startup and Incubation Centre (DeSIC)**, which serves as a hub for creativity, ideation, and entrepreneurial growth. Acting as a catalyst for transformative ideas, DeSIC supports students and faculty in developing their concepts into sustainable startups. Among its flagship initiatives, DeSIC offers the *Incubation Program*, the *i2B Innovation Weekend* event, and the *Tech Support for Students* group event, all designed to equip the DeKUT community with the skills, mentorship, and networks necessary to turn innovative ideas into tangible impact.

Rise 4.0: Where Ideas Learn to Walk Before They Run

Innovation has a rhythm. Sometimes it starts as a whisper — a question, a curiosity, a quiet discomfort with the status quo. But when nurtured in the right ecosystem, that whisper becomes a roar. At DeKUT, ***Rise 4.0*** whose theme was ***Reimagining innovation for sustainable ecosystems through industry 4,*** became the drumbeat calling young innovators to rise higher, think deeper, and build boldly.

Running from the 23rd to 28th November 2024, Rise 4.0 was more than a program; it was a proving ground where raw ideas met structured thinking. This initiative was part of the UK-India-East Africa Research, Innovation, and Entrepreneurship Partnership (RIEP),









which was supported by the UK's Foreign, Commonwealth and Development Office (FCDO) to promote collaborative research and innovation across India, East Africa, and the UK. It was where students stretched their imagination like a blacksmith heating iron — softening what was rigid, shaping what was rough, and forging tools that solved real problems. Through mentorship, design thinking, structured learning, and collaborative creativity, Rise 4.0 equipped participants not just with skills, but lenses — the ability to see opportunities where others saw obstacles.

In its most recent cohort, Rise 4.0 brought together minds from diverse disciplines to explore paths in ***AI, hardware innovation, climate tech, community-centered solutions, and scalable digital ventures.*** The event gathered students from the **University of Dar es Salaam in Tanzania (UDSM), IIT Madras (IITM) in India, Dedan Kimathi University of Technology (DeKUT)** in Kenya, and **Riara University** in Kenya, encouraging teamwork to tackle some of the world's most critical challenges.

Key to the success of this initiative were: The Vice Chancellor of DeKUT; Prof. Eng. Peter N. Muchiri, and the Deputy Vice Chancellor A&F, Prof. Esther Nkirote Magiri, who paid the students a visit to officially welcome them and encourage them on their journey. Dr. James Wakiru and Dr. Jane Kuria, mentors from DeKUT, also received the guest institutions with enthusiasm. Dr. Moses Ismail, from the University of Dar es Salaam, and Tabea Mbughuni, from UNDP Funguo Programme were also a key piece of the puzzle.

Within those sessions, something sacred happened: students discovered that innovation is not reserved for the 'gifted few' — it is a discipline anyone can practice when courage meets community.

The hackathon culminated with the highly anticipated pitching event at the Kenya

Innovation Week. The winners were announced at an elegant gala dinner hosted by KeNIA, attended by all hackathon participants, mentors, and partners. The two winning teams and the faculty travelled to the Indian Institute of Technology-Madras for a 2-weeks immersion in the IITM Incubation Cell (IITMIC), India's leading Deep-tech Startup hub. Among them, one student already has a start-up company incubated at IITM, while several of the students are currently incubated in the Pre-Incubator at IITM being guided in their innovations.

As we gather to celebrate

the 19th Graduation Ceremony,

we acknowledge that the future belongs to builders — men and women who refuse to accept the world as it is and instead commit to shaping it as it should be.

Rise 4.0 embodied a truth we hold dear at DeKUT: **that the next frontier of Kenya's progress may already be sitting in our lecture halls, sketching prototypes on scraps of paper, or pitching their first imperfect ideas at innovation weekends and ideation hubs**. Our work is simply to give them the wind they need to take flight.

i2B Innovation Weekend: When Ideas Become Stories Worth Telling

If Rise 4.0 is the furnace where ideas are forged, then the **i2B Innovation Weekend** is the marketplace where they are tested, challenged, refined, and celebrated.

DeSIC, in collaboration with CIEM, DeHUB, and DeST-Park, organized the DeKUT i2B Innovation Weekend, where student innovators and entrepreneurs come together to ideate, form teams, and enable the students to refine and develop the ideas for ultimate pitching. Key aspects envisaged to be entrenched, starting with the end in mind, such as business modeling, mindset shift, and pitching.

Held on 3rd and 4th October 2025, the i2B Weekend brought together **288 students**, dozens of coaches, industry partners such as DeKUT faculty members, Konza Technopolis,







Equity Group Foundation, Dedan Kimathi Science and Technology Park (DeST-Park), Coca-Cola Kenya, Kenya Industrial Property Institute (KIPI), the ICT Authority, and a reservoir of daring creativity.

The Deputy Vice Chancellor, Academic Affairs and Research, Prof. Eddy Owaga, graced the session, explaining the DeKUT innovation ecosystem, emphasizing the importance of innovation, and outlining opportunities available for innovators. He also highlighted the ongoing opportunities for innovators and the associated benefits. For two days, Satima Atrium Block transformed into a living ecosystem of energy — the kind you feel in the air when people dare to dream in the same direction. The program's facilitators were Dr. James Wakiru, Dr. Paul Tanui, Dr. Jane Kuria, Dr. Ann Sang', Dr. Rosemary Kagondu, and Prof. Wamwara.

The event was built on a simple but powerful philosophy: **Ideas must move — from mind → model → market.**

Students engaged in: ideation workshops, business modeling, branding and marketing sessions, pitch deck training, intellectual property protection sessions, and direct coaching from experts in academia and industry. When the moment of truth came, the room witnessed electric ideas: from agritech innovations addressing pests and post-harvest loss to mental health platforms, sustainable energy solutions, healthcare access apps, and climate-focused prototypes. Twelve teams made it to the final pitching stage, and three ultimately emerged as top winners — not because their ideas were perfect, but because they were brave enough to refine, defend, and dream aloud.

The weekend was a reminder that innovation is communal. No idea grows in isolation. **When a student shares an idea, they are also sharing hope — and every mentor, judge, partner, and fellow teammate becomes a midwife to that hope.**

More than a competition, i2B was a celebration of possibility. A reminder that creativity is Kenya's hidden currency. A testament that DeKUT is not just teaching theory — **it is shaping builders**.

Student-Led Innovation Clubs (SLICs): Where the Culture of Innovation Lives

At DeKUT, innovation is not an event. It is not a weekend program, a competition, or a box to tick. **Innovation is a culture — a way of thinking, a way of being.** And nowhere is that culture more alive, more vibrant, and more student-owned than in the **Student-Led Innovation Clubs (SLICs)**.

These clubs are the heartbeat of DeKUT's innovation landscape. They are the places where curiosity is never mocked, where failure is reframed as data, and where students learn the art of leading without titles. Here, learners from engineering to business, computing to environmental sciences gather — not because grades demanded it, but because passion called.

SLICs embody peer-driven learning, cross-disciplinary collaboration, community-centered problem solving, ownership and accountability, and creativity without permission. They are the spaces where hackathons are born, where weekend prototypes become semester-long ventures, where competitions are prepared for, and where friendships become co-founder relationships.

In many ways, SLICs have become **the firekeepers of innovation at DeKUT**. They keep the embers burning long after the event ends. They ensure that learning does not end when classes do. They give every student — from the unsure first-year to the bold finalist — a place to belong, to try, to fail, to grow, and to build.

As we gather to celebrate the ***19th Graduation Ceremony***, we acknowledge that the future belongs to builders — men and women who refuse to accept the world as it is and instead commit to shaping it as it should be.

Rise 4.0 sharpens the mind. i2B accelerates the journey. SLICs sustain the culture.

Together, they form the backbone of DeKUT's innovation ecosystem — an ecosystem rooted in purpose, strengthened by community, and guided by the belief that every student carries within them a spark capable of igniting change.

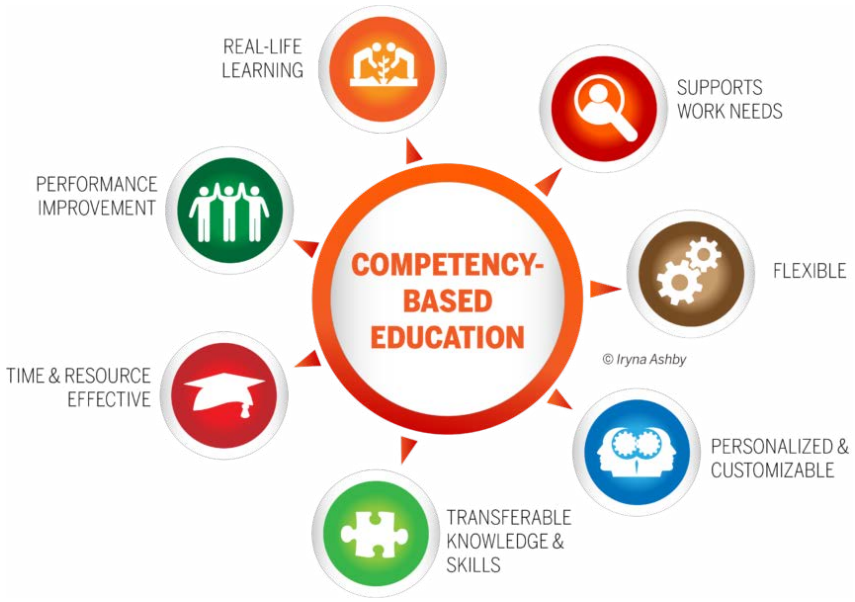
This is our story. This is our culture. This is DeKUT — Where Innovators Learn to Rise.



FORGING THE FUTURE: DeKUT'S STRATEGIC PIVOT TO COMPETENCY-BASED ENGINEERING EDUCATION

Dr. Addero Wilson Ogot

Technology Education Department



These learners will be fundamentally different: they are problem-solvers, critical thinkers, and collaborative team players from their earliest school years. The question for Kenyan universities is not *if they will adapt, but how*. At DeKUT, our answer is a comprehensive, multi-pronged strategy to align our engineering education with global best practices and national aspirations.

As we celebrate the achievements of the graduating class, we also look forward with strategic intent, positioning Dedan Kimathi University of Technology at the forefront of a transformative educational shift in Kenya. The national transition to the Competency-Based Curriculum (CBC) is not a distant wave on the horizon; it is a current we are actively navigating, ensuring our institution is the destination of choice for the future innovators of Kenya.

The graduation of this cohort marks a significant milestone, but it also heralds a new era. The students who entered our halls under the 8-4-4 system are leaving just as the University intensifies its preparations for the first CBC cohort, which will arrive at our doors in 2029.

Aligning with Global Benchmarks: The Washington Accord Integration

A cornerstone of our preparedness is the deliberate integration of the Washington Accord standards into our engineering programs. This international agreement grants mutual recognition to engineering degrees, signifying that a graduate from DeKUT possesses competencies on par with their peers in signatory countries like the USA, UK, Australia, and South Africa. This is more than a badge of honour; it is a rigorous framework that demands a shift from what students *know to what they can do*.

Our curriculum redesign, particularly within the School of Engineering, now explicitly emphasizes the graduate attributes outlined by the Accord. This includes a strong focus on complex problem-solving, design and development of solutions, ethical responsibility,

and effective communication—competencies that are the very bedrock of the CBC philosophy. By embedding these standards, we are ensuring that a DeKUT Engineering Degree is not just a certificate, but a globally recognized passport to a professional engineering career.

Empowering the Educators: Capacity Building with the Engineering Board of Kenya

Recognizing that curriculum change is futile without empowered faculty, DeKUT has proactively partnered with the Engineers Board of Kenya (EBK). A significant milestone has been the comprehensive capacity-building program for our School of Engineering lecturers on Outcome-Based Education (OBE) standards.

This intensive training has equipped our faculty with the pedagogical tools to design and deliver education focused on demonstrable outcomes. Our lecturers are now adept at creating learning experiences where theoretical knowledge is seamlessly integrated with practical application, mirroring the hands-on, skill-based approach of the CBC. This investment in our human capital is perhaps the most critical step in ensuring a smooth and successful transition for future students.

A Framework for the Future: The DeKUT-Competency Education Framework (DeKUT-CEF)

Looking ahead, our most ambitious initiative is the planned development of a bespoke Competency Education Framework (DeKUT-CEF), to be crafted in collaboration with the University of Alberta, Canada, a world leader in innovative engineering education. This partnership will not merely adapt existing models; it will pioneer a framework tailored to the Kenyan and African context. The DeKUT-CEF will provide a structured approach to map, deliver, and assess competencies across all our technology-driven programs. It will ensure that every graduate, regardless of discipline, leaves DeKUT with a validated portfolio of skills that are directly relevant to industry and societal needs.

The 2029 Horizon: A University Ready for the CBC Graduate

While many universities in Kenya are still grappling with the implications of the CBC, DeKUT is moving from planning to implementation. The question of readiness for the 2029 cohort is one we are answering today through strategic global alignment, faculty development, and foundational framework construction.

When the first CBC graduates walk onto our campus, they will find an institution that speaks their educational language. They will enter learning environments designed to build upon their competency-based foundation, with educators trained to nurture their problem-solving abilities, and a curriculum structured to transform their inherent potential into professional excellence.

To the graduating class, we say congratulations! You are the pioneers of DeKUT's legacy. And to the future classes, particularly the CBC generation of 2029, we declare: DeKUT is ready to receive you, to challenge you, and to equip you to engineer the future of our nation.

ENGAGE PROJECT: AWAKENED FUTURES: INSIDE THE ENGAGE JOURNEY OF YOUNG WOMEN IN AI

By Dr. Jane Kuria,
Assoc. Dean SCS & IT and Regional Coordinator ENGAGE Project



At 1:00 AM, while most of Kenya slept, a different kind of sunrise was happening in homes across 11 counties. Mothers packed bags, fathers whispered blessings, and young girls brave, bright, and hopeful prepared for a journey that would transform their futures. They travelled to Dedan Kimathi University of Technology, stepping into a world many had only imagined.

This is the journey of Kawira and her father Patrick, who travelled form Samburu County. There was no public transport, they had to get a ride from bread delivery vehicles the Maralal Safaris to report for ENGAGE.

"I wanted to empower my child in technology, because girls can also be good in technology." Pauline –Tier 1 parent

ENGAGE Project (ENabling Girls in AI and Growing Expertise) is a project that trains girls in AI and Data science at all levels. Tier1 (High School Girls), Tier 2 (TVET) and Tier 3 (University Students) has grown into a remarkable movement, one that does not just teach AI, but awakens possibility. Between 2024 and 2025, ENGAGE trained 35 Tier 3 girls, guiding them through advanced AI projects, health datasets, and a transformative internship. In 2025, 20 new Tier 1 girls joined the family, starting their journey with curiosity and excitement on 24th November, 2025.

"I loved mathematics, but I didn't know where it could take me. ENGAGE turned that talent into a vision, a purpose, and a future I'm excited to build.".









Ayak, Tier 1 beneficiary, a Sudanese Refugee

The **ENGAGE classroom** is alive with energy. Girls debate ideas, test models, laugh through errors, and celebrate breakthroughs. Tier 1 girls build their first AI models, while Tier 3 girls refine advanced prototypes. Some touch a computer independently for the first time; others discover a space where their voices finally matter.

"I called everyone at home to tell them I develop and deployed an AI model. I was so excited." Ivy Tier 3 Beneficiary, 2025

One of the most transformative moments for Tier 3 girls is the hospital internship. Walking into a health records office feels like stepping into the reality behind the data. They see how patient files affect treatment, how missing data delays care, and how AI can save lives. For many, this is the moment they choose their future careers.

"*I realized AI is not just technology it can save lives."* Tier 3 Emmah, 2025

DeKUT provides the perfect home for ENGAGE. More than a learning environment, it is a place of belonging. Faculty treat the girls as young scholars, mentors guide them with patience, and innovation spaces like DeHUB and DeSIC spark creativity.

"At DeKUT, we remain committed to empowering young women in STEM. ENGAGE reflects our dedication to nurturing talent and expanding opportunities for girls across the country." Prof. Eng. Peter Muchiri EBS, VC DeKUT, 2025

Over two years, ENGAGE has trained 55 girls, built capacity with 21 computers, strengthened partnerships with hospitals, and inspired dreams in AI, biomedical engineering, data science, and cybersecurity. The most beautiful transformation: girls who once doubted themselves now believe they can lead Africa's AI future.

As ENGAGE grows, the focus remains on sustaining and enriching the transformative experiences offered through Tier 1 Tier 2, and Tier 3. By expanding mentorship networks, supporting girls through hands-on data projects, and maintaining partnerships with hospitals and universities, ENGAGE seeks to empower a steady pipeline of young women prepared for STEM and AI pathways in the years ahead.

"Through the ENGAGE project, I am more inspired, more grounded, and more committed to community driven change." Fiona, Tier 3 Beneficiary 2025

As the sun sets over DeKUT's green hills, the girls walk from class discussing algorithms, health systems, and dreams no longer out of reach. ENGAGE is not just teaching, the programme shows girls they do not need permission to dream, they only need opportunity.

ENGAGE gives them that opportunity, one girl, one cohort, one transformation at a time.

FROM INNOVATION TO IMPACT: STRENGTHENING SKILLS THROUGH VIRTUAL WORLDS AND ENGINEERING EXCELLENCE

As a flagship outcome of the Skills Initiative for Africa (SIFA), the Virtual Mechatronics Labs at Dedan Kimathi University of Technology continue to showcase how immersive technology is reshaping engineering education across the continent. With advanced infrastructure and a forward-looking training model, the labs now stand as a continental reference point for virtual learning, mechatronics, and industry-aligned technical training.

Virtual Reality Mechatronics Labs: Where Immersive Technology Meets African Ingenuity

In September 2025, the Labs expanded their impact through the training of the TVET students. This program equipped learners with hands-on experience in virtual pneumatics, automation systems, electrical diagnostics, and digital-twin environment, strengthening their readiness for modern industrial workspaces. The SEP cohort marked an important step in DeKUT's mission to develop a future-ready workforce through scalable and immersive engineering training.

Under the leadership of Prof. Eng. Jean Bosco, the Siemens Centre and Virtual Mechatronics Labs (VML) continue to drive creativity and applied research, enabling learners to solve real-world challenges through interactive virtual simulations. This year's achievements reaffirm DeKUT's commitment to advancing innovation and preparing Africa's next generation of engineers with the tools and mindset required for tomorrow's Industry 4.0 landscapes.

Leadership, Inspiration and Collaboration: A Year of High-Profile Visits

The year also saw distinguished national and professional engagements that reinforced the strategic importance of DeKUT's Virtual Mechatronics Labs.

In July 2025, the Virtual Mechatronics Labs (VML) proudly hosted General (Rtd.) Robert Kibochi, PhD, EGH, CBS, former Chief of the Kenya Defence Forces. His visit highlighted the growing relevance of immersive technologies in national capacity building, defence innovation, and high-level technical preparedness. His interaction with students and trainers was a powerful affirmation of VML's role in shaping a technologically skilled and future-ready generation.

In the period that followed, in October 2025, VML hosted IEEE Kenya for a landmark technical engagement (Tech X) that brought together over 100 students from various universities across the country. The event showcased the power of VR, AR, and digital-twin technologies at VML, offering students hands-on demonstrations, mentorship, and exposure to cutting-edge engineering applications.

The strong turnout and enthusiastic participation demonstrated the rising interest in immersive technologies as catalysts for innovation and research.



Together, these engagements underline VML's growing influence as a national and regional hub where academia, industry, defence, and professional bodies converge to explore the future of engineering through immersive, impactful, and collaborative learning.

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IMPORTANCE OF GEOLOGICAL FIELD SCHOOL

By Dr. Patrick Kirita Gevera, Lecturer, GeTRI





With the re-emerging and increased needs for critical and industrial minerals, energy, and environmental concerns, the field of Geology has become more essential in any country. In Kenya, the need to become an industrial country will require the exploitation of renewable energy sources, such as hydro and geothermal power, as well as industrial and critical minerals like iron and coltan, all of which are available in Kenya.

To achieve this potential, the Geothermal Energy and Research Institute (GeTRI) at DeKUT offers a BSc in Geology program that trains geologists. Among the program's activities are geological excursions. This is a critical aspect of geology that involves teaching students how to extract information from geological materials (rocks, soil, and water) to understand how rocks form, which minerals they host, and how these resources can be beneficial to us. The fieldwork, which is usually carried out once a year, is an intense activity where students go to gain hands-on experience in the field to have hands-on experience of applying what they learn in class and the laboratory to the real world. The students learn how to document all geological details in field notebooks, including observations, field sketches, and interpretative diagrams, which will later result in a geological field report accompanied by field maps and cross-sections.



The Institute recently took 2nd, 3rd, and 4th year students on a field excursion in the Machakos-Kitui area, where the students learned about the geology of the Ukambani area, mapped the rocks and soil, and assessed the economic potential of the region. This activity not only teaches students to be good geologists but also develops their social skills as they interact with the local community while exploring the area. This is a critical learning aspect, as in their final year, students are expected to map the geology of a 10x10 km² area alone in a span of one month. After the fieldwork, the students returned to the university laboratories with their rock, soil, and water samples to conduct detailed analyses of the materials and later produced geological field reports. The pictures below demonstrate the different activities the students undertook in the field.



DeKUT CHANNEL: TELLING OUR STORY

By Dr Anthony M. Maina and Moses Makara

In a world shaped by digital media, Dedan Kimathi University of Technology took a visionary step in 2020 by establishing DeKUT Channel, a web TV platform dedicated to telling our story. Hosted in the ICT Directorate's Audio-Visual Section, the channel reflects the University's motto of *Better Life through Technology* and promotes academic freedom through local and contextually relevant content.

DeKUT Channel is powered by IPTV (Internet Protocol Television), a modern technology that delivers television content through the internet rather than traditional broadcast methods. Unlike downloadable media, IPTV enables real-time streaming, allowing viewers to watch live events and Video on Demand (VOD) on internet-enabled devices like smartphones, computers, and smart TVs. This technology has been used since the early 2000s in diverse environments such as universities and corporate institutions.

From its inception, DeKUT Channel has remained true to its vision—*Telling Our Story*. It captures and broadcasts the vibrant academic, technological, and social life of the University. The platform allows DeKUT to produce and share its own content without the limitations of third-party streaming platforms. It offers a creative space where staff and students can explore digital media production, showcase talent, communicate ideas, and broadcast events that matter to the University community.

Technically, the channel operates through specialised streaming software and server infrastructure hosted within the University. Events are recorded using cameras and microphones, digitally encoded into video streams, and transmitted via the University's network. Users access live broadcasts or recorded programmes by simply visiting **dekutchannel.dkut.ac.ke**, streaming 24 hours a day.

Since its launch in March 2021, DeKUT Channel has grown into a dynamic digital archive and broadcasting hub. It has streamed over 50 major live events (including graduation ceremonies, conferences, seminars, innovation expos, requiem masses, and open days) and produced over 500 original short videos. Analytics indicate that the channel has reached more than 1 million viewers across 150 countries, with over 2.8 million hits to date. It has also saved the University significant costs that would have been incurred through outsourcing live media coverage.

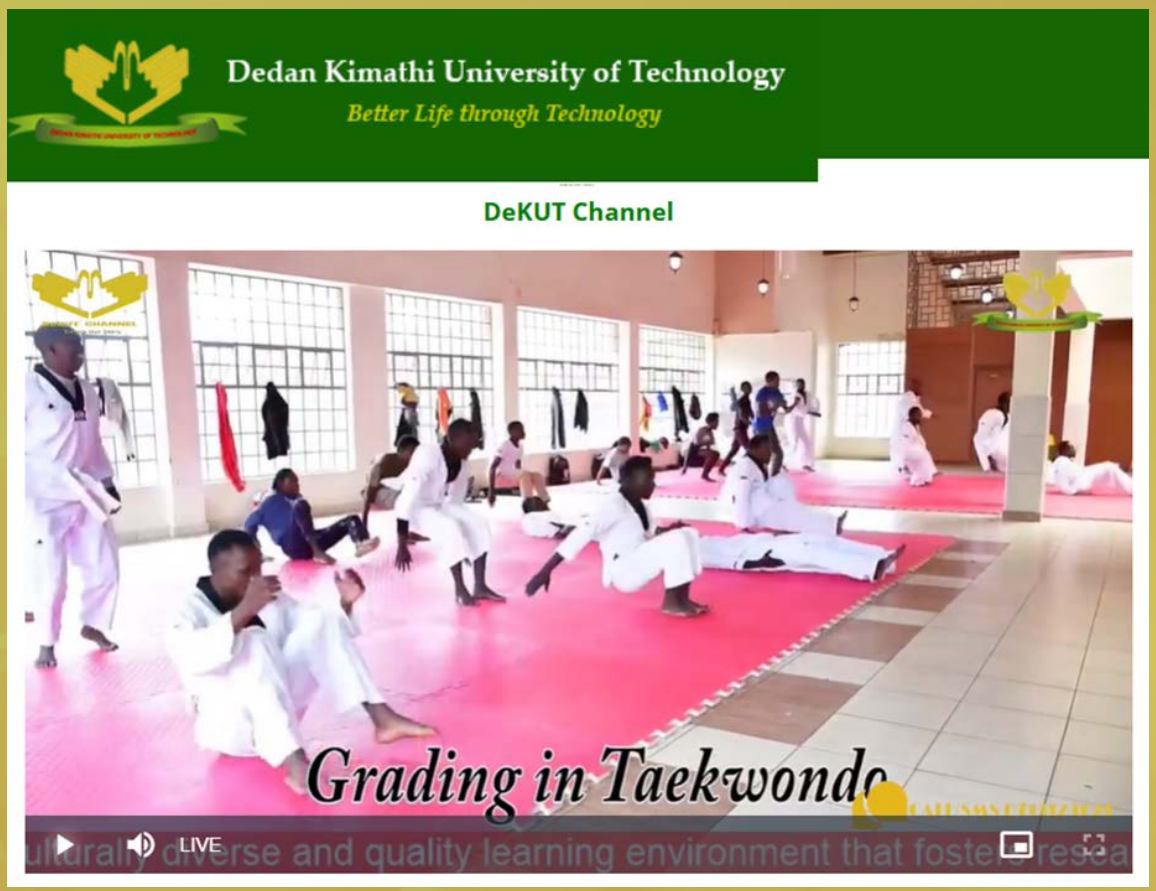
Looking ahead, DeKUT Channel presents exciting opportunities for branding, digital content innovation, and revenue generation. It offers a powerful platform for showcasing University programmes, supporting public outreach, preserving institutional history, and providing streaming services to external partners. With the potential for monetisation through sponsored content and targeted ads, the channel stands as a promising vehicle for both impact and sustainability.

More than a media outlet, DeKUT Channel represents the first step in DeKUT's vision of creating a full-fledged Digital Media City. It also aligns with the ICT Strategic Plan, which seeks to enhance digital presence and harness technology for learning and innovation.

As we celebrate this year's graduation, DeKUT Channel does more than capture moments. It helps write our story, one stream at a time.

dekutchannel.dkut.ac.ke – Telling Our Story!





EMPOWERING LEARNING THROUGH INNOVATION: INSIDE THE CODeL DEPARTMENT AT DeKUT

The Centre for Open and Distance Education and Learning (CODeL) at Dedan Kimathi University of Technology is a cornerstone of the University's commitment to accessible, flexible, and technology-driven learning. In an age where education is rapidly evolving, CODeL has positioned itself as a leader in digital transformation, ensuring that learners across Kenya and beyond can pursue quality higher education regardless of distance, time, or professional commitments.

A Hub of Modern Learning Solutions

CODeL reinforces DeKUT's commitment to academic excellence by integrating innovative teaching methodologies with modern educational technologies.

At the heart of this transformation is the University's Learning Management System—Moodle—a robust and user-friendly platform that supports blended, online, and distance learning. Through Moodle, students can easily access course materials, participate in discussions, submit assignments, and track their academic progress with unparalleled flexibility. Recent upgrades have introduced a new AI subsystem that integrates with leading AI providers like Gemini, OpenAI, and Azure. This powerful system offers features such as content generation, summarization, translation, and assessment creation, with the Gemini AI plugin already operational on the platform. These advancements give CODeL the ability to manage AI services under clear governance, while maintaining full control over data use and AI ethics, in line with Moodle's "AI, your way" philosophy.

To make learning more engaging, CODeL has adopted ClassPoint, smart interactive panels, BigBlueButton, and WebinarJam, which are gradually replacing traditional projector-based teaching. These tools bring real-time interactivity and enhanced participation into classroom and virtual environments.

Supporting Learners with Excellence

CODeL is home to a highly dedicated team of academic and technical staff who ensure that learners receive comprehensive support from the moment they join until they complete their programmes.

Students benefit from:

- 24/7 Moodle access for self-paced learning
- Interactive discussion forums and direct messaging
- Live virtual classes via BigBlueButton, fully integrated into Moodle
- High-capacity webinars



delivered through WebinarJam
- Recorded lectures for revision and flexible study
- LMS orientation sessions and digital literacy training
- Prompt technical support via helpdesks, forums, and email
- Leveraging Technology for Greater Impact

CODeL continues to enhance its digital learning ecosystem through advanced capabilities embedded within Moodle and integrated third-party tools.

1. **Digital Assessments and e-Proctoring**

Moodle enables secure, flexible online assessments with timed quizzes and exams, randomized question banks, automated grading, and secure proctoring tools.

2. **Streamlined Assignment Management**

Lecturers use Moodle to create and manage assignments, apply rubrics or grading guides, and provide inline comments and structured feedback.

3. **Multimedia-Based Learning**

Students learn through videos, graphics, interactive activities, and engaging resources that improve comprehension and participation.

4. **Real-Time Analytics for Student Progress**

Moodle's analytics tools help instructors monitor activity completion, attendance, module progress, and engagement trends, enabling timely academic intervention.

5. **Integration with Cutting-Edge Tools**
- BigBlueButton for interactive virtual classes with breakout rooms and real-time collaboration
- WebinarJam for high-impact online lectures and webinars
- ClassPoint for dynamic presentations, in-class quizzes, and visual annotations
- Smart interactive panels that replace projectors and support touch-based learning

Commitment to Quality and Inclusion

CODeL upholds DeKUT's values of integrity, inclusivity, and innovation by ensuring that all digital learning platforms remain accessible to students in diverse regions and learning environments. Through continuous staff training, system upgrades, and adherence to global e-learning standards, the department guarantees high-quality, reliable, and equitable access to education.

Looking Ahead: The Future of Learning at DeKUT

As digital learning expands globally, CODeL is committed to staying ahead through strategic investments and innovations. Future plans include increased integration of AI-powered learning tools, expansion of digital content creation studios, enhanced virtual labs for STEM programmes, broader adoption of interactive teaching technology, extended use of BigBlueButton and WebinarJam, and strengthened partnerships with global online education institutions. These advancements position CODeL to remain a leading centre for digital education - empowering learners through innovative, flexible, and high-quality academic experiences.

FORGING THE FUTURE: QUALITY ASSURANCE AS DeKUT'S STRATEGIC COMPASS

By CQP Monicah Kibui, Directorate of Quality Assurance

As we celebrate the outstanding achievements of our graduates, it is fitting to reflect on the engine that has propelled their academic journey at DeKUT. Beyond the lectures, practical sessions, and late-night study marathons, lies a foundational principle that has shaped their experience and elevated their potential for success: our institutional culture of Quality Assurance (QA).

Often misunderstood as a mere compliance requirement, QA at DeKUT is in fact the cornerstone of our strategic excellence. It is the deliberate, structured process that transforms ambition into achievement and potential into performance. Here, QA is not a peripheral activity, it is a core management function and a strategic advantage embedded in every facet of the University experience.

Through this robust QA framework, we ensure that the Class of 2025 is not merely part of national graduation statistics, but a cohort of highly prepared professionals equipped to deliver innovative solutions to industry and society.

QA: More Than a Checklist-A Mindset for Excellence

At DeKUT, Quality Assurance is not just a directorate; it is a dynamic mindset and culture. It reflects our unwavering commitment to continuous improvement and the relentless pursuit of excellence. This strategic orientation ensures that every graduate is not only qualified but exceptional, armed with the ability to build a strong and purposeful bridge between academic theory and real-world impact.



This philosophy of quality has driven some of DeKUT's most notable achievements:

1. **Adherence to Global and Local Standards:** Our alignment with the Washington Accord principles and the Commission for University Education (CUE) among other standards is a clear demonstration of our systemic commitment to quality. This global recognition assures employers and partners that DeKUT graduates are nurtured in a standardized, audited, and excellence-driven environment, giving our degrees significant weight and respect in the global marketplace.
2. **A Robust Internal Quality Assurance System:** Our data-driven Internal Quality Assurance system includes continuous monitoring of teaching and learning, regular program self-assessments, regular internal audits and proactive stakeholder engagement. This ensures that our academic and administrative processes are not only maintained but consistently refined and improved.

3. **Cultivating Industry-Ready Graduates:** DeKUT's dynamic curriculum is strengthened by a rigorous QA process that integrates feedback from industry experts, outcomes of curriculum reviews, and emerging market trends. This ensures that what students learn aligns with what the world needs. Our celebrated strength in STEM programs is directly tied to this feedback loop—producing not just job seekers, but job creators and industry leaders.
4. **A Green, Serene, and Conducive Learning Environment:** Our environmentally conscious and well-maintained campus is a physical expression of our QA ethos, reflecting a commitment to enabling holistic, high-quality learning that nurtures both mind and spirit.

Our graduates are the ultimate beneficiaries of this sophisticated QA ecosystem. The quality advantage they carry into the world is multifaceted:

- **A Problem-Solving DNA:** They are trained not just to identify challenges but to analyze root causes, design practical solutions, and deliver results.
- **Immersion in a Culture of Excellence:** Having been nurtured in an environment where quality is strategy and excellence is the norm, they now embody these values in their professional and personal pursuits.
- **Adaptability in a Dynamic World:** In an era defined by rapid change, the principles of continuous improvement, innovation, and adaptability become invaluable. Our graduates are equipped for lifelong learning and reinvention.

Our graduates are the ultimate beneficiaries of this sophisticated QA ecosystem. The quality advantage they carry into the world is multifaceted

As you step into the world of work, carry with you this strategic compass. Be ambassadors of the DeKUT QA approach: the engineers who build safer structures; the innovators who design reliable technologies; the scientists who develop sustainable solutions; the nurses who provide safe, quality-assured care, the entrepreneurs who launch impactful ventures; and the business leaders who champion ethical, enduring enterprises.

You are not just graduates, you are quality-assured champions of a better tomorrow, forged in the crucible of DeKUT's strategic excellence.

Congratulations, Class of 2025. Go forth and build with quality.

HOW COLLABORATION POWERS QUALITY IN DeKUT- FROM LEADERSHIP TO LECTURE HALLS

By Ms. Esther Mbuva, Directorate of Quality Assurance

Quality graduates in Dedan Kimathi University of Technology are not created by policies alone; they are created by various people working together. When leadership, academic departments and students work in partnership, quality becomes a shared culture rather than a compliance requirement.

1. **The Leadership Table Senate Quality Assurance Review Committee (SQARC)**

One of the most powerful forms of collaboration in Quality Assurance happens at the leadership level. SQARC is not just a meeting; it is a collaborative engine that brings quality to the decision table. It is where quality data turns into real institutional decisions. Where DQA Staff and Management come together and interpret the stories behind the numbers.

SQARC plays a pivotal role in providing strategic direction, oversight, and accountability. Actions are jointly approved, implemented, and monitored, ensuring that the quality of education and graduates at DeKUT is never left to chance. Decisions on teaching, assessment, the learning experience, and overall institutional performance are made with shared insight and collective responsibility.

2. **The Academic Frontline (Departments and Quality Assurance Champions)**

Departments turn quality from theory into practice; they are the frontlines where plans become a real experience. These teams are the frontline custodians of teaching and learning, and our collaboration with them ensures that quality does not stay theoretical. Quality Assurance Champions serve as collaborative partners between the Directorate and Departments, they have helped operationalize Quality Assurance at department levels.

QA works directly with departments throughout the entire Self-Assessment Report (SAR) process: sensitizing teams on expectations, providing clear templates and benchmarks, clarifying what "quality" looks like in measurable terms, and offering targeted feedback.

Beyond audits, departments collaborate closely with QA in Curriculum Development and Review. QA contributes data-driven insights and external standards to ensure that new or revised programmes are not only compliant but competitive. This partnership becomes a strategic asset that strengthens DeKUT's reputation and enhances the overall learning experience.

3. **The Students Voice**

Students are not just recipients of education; they are active contributors in shaping it. QA recognizes that their insights whether from surveys, lecturer evaluations, or student representatives are essential for meaningful improvement.

QA collaborates closely with students to understand their experiences, identify gaps, and co-create solutions where possible. Their feedback informs curriculum refinement, teaching approaches, and assessment practices, ensuring that decisions reflect the realities of the lecture halls. Through this partnership, feedback has evolved from a static report into actionable strategies that enhance learning and strengthen the student experience.

Collaboration is the heartbeat of quality at DeKUT. From strategic decisions made at leadership tables to the hands-on work of academic departments and the insightful contributions of students, every stakeholder plays a vital role in shaping the learning experience. DeKUT's success depends on embracing and sustaining these collaborative efforts.

Every voice matters, every insight drives improvement, and every coordinated action strengthens DeKUT's collective commitment to academic excellence.

Congratulations Class of 2025, and may you continue to shine as ambassadors of quality!



DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY
OFFICE OF CAREER SERVICES
(DeKUTOCS)

2ND ANNUAL CAREER FAIR 2025

Theme: Navigating Emerging Industries and Sustainable Careers

Day One: Setting the Stage for Future Readiness

Dedan Kimathi University of Technology proudly launched its 2nd Annual Career Fair on 24th September 2025, bringing together industry leaders, professionals, and students for the 3-day event to explore career readiness and future opportunities. The day featured company showcases and thought-provoking sessions from distinguished speakers including **Maureen Gatimu** (Absa Bank Kenya PLC) – *Bridging the Gap Beyond the Degree*, **Christine Mandala** (Trufoods Limited) – *CV Writing and Interview Preparedness*, and **Wilfred Kipkazi** (National Employment Authority) – *Foreign Labour Migration and Local Placement.*

Other notable speakers included **Diana Leden** (Uniconnect), **Brian Otieno** (Laikipia Wildlife Forum), and **Eliud Thiong'o** (Braymell Traders Limited), who challenged students with *Being Future Ready: Are You Plug and Play?*

The highlight was a keynote by **CHRP Susan Kakai** (Sanlam Life Insurance) on *From Campus to Career: Equipping Students for Emerging Industries and Lifelong Success.* Her address emphasized adaptability, lifelong learning, and the mindset needed to thrive in today's dynamic job market. Day One successfully set the tone, strengthening academia-industry linkages and equipping students with employability skills.



Day Two: Practical Skills and Mentorship

Day Two began with a refresher on *CV Writing and Interview Preparedness* by **Christine Mandala**, setting the pace for an interactive mock interview session. Students engaged with a panel of experts including **Faith Mutheu** (DeKUT), **Florence Rukenya** (Trufoods), **Judith Odhiambo** (Odoo), **Lameck Mito** (ACCA East Africa), **Eric Mithamo** (Licensed Land Surveyors Ltd.), **Samuel Otieno** (EBK), and **Dr. Daniel Njoroge** (DeKUT Career Services).

In the afternoon, specialized breakout sessions across schools and institutes provided mentorship and industry insights. Facilitators included **Maximilian Mugambi** (Balora Design Group), **Bernard Wanjau** (Britam), **Thomas Kabanya** (National Nurses Association of Kenya), **Brian Otieno** (Laikipia Wildlife Forum), and **Ummekulsum Bohari** (Odoo). Discussions covered professional ethics, entrepreneurship opportunities, career pathways, and emerging trends.

Day Two stood out for its hands-on approach, offering students personalized guidance, real-time feedback, and mentorship to enhance their preparedness for the world of work.





Day Three: Empowerment and Closing Highlights

The final day focused on holistic career development. **Margaret Muthura** (Old Mutual) opened with an interactive session on the Old Mutual *Thrive Wellness App*, emphasizing focus and information retention. This was followed by an Employer-Brand Showcase by **Breneen Maloba** (Old Mutual), highlighting pathways to the Old Mutual Academy, emerging industry trends, and a practical CV writing and interview role-play.

Nicholas Mutuku (Old Mutual Life Business) delivered a powerful Financial Education session, equipping students with knowledge on financial management, investment, and entrepreneurship. A mock interview session led by **Breneen Maloba**, with panellists **Christopher Karani** (Old Mutual EA) and **Dr. Daniel Njoroge** (DeKUT), gave students real-time feedback and strategies for success.

The fair concluded with an interactive Q&A forum, a keynote by **Christopher Karani**, and closing remarks by **Prof. Eng. Peter Muchiri**, Vice Chancellor of DeKUT. Day Three wrapped up the event on a high note, leaving students empowered with skills, knowledge, and networks to navigate emerging industries and pursue sustainable careers.

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INVESTMENT GUIDE FOR GRADUATING KENYAN STUDENTS

By Paul Kihara



Turn Knowledge into Wealth

As you step into the world of work, careers and immediate income dominate your thoughts. But consider this: investing is not just about money—it is a life skill. It is a mindset, a discipline, and a path to purposeful growth and multi-generational wealth.

Kenya's financial markets have long been dominated by foreign investors. While this can feel intimidating, it is actually an opportunity: you can learn, participate, and even shape the local economy while building skills that last a lifetime.

"Start small, think big, invest in yourself as much as the market."

Why You Should Care

Early participation compounds over time; your greatest advantage is time. Investing hones decision-making, research, risk management, and strategic thinking. You can invest in businesses and assets aligned with your values. Smart investments can benefit your family for decades. Learning from national wealth strategies, such as the Kenya Sovereign Wealth Fund and Norway's Government Pension Fund, offers lessons on long-term planning, diversification, and sustainable growth.

Lessons from Global Cultures

Jewish Tradition (Talmudic Wisdom) emphasizes prudent financial management, ethical trade, and wealth creation as skills passed down generations. *The Igbo People of Nigeria* teach

children early how to manage money, identify opportunities, and reinvest profits. Investment is treated as a skill to master, not just a way to earn.

For Kenyan graduates, it is important to learn investing as a skill, not speculation. Combine formal education, mentorship, and hands-on experience. Use soft skills like communication, critical thinking, and adaptability to succeed. Observe national models such as the Kenya Sovereign Wealth Fund and Norway's sovereign wealth fund to understand disciplined, long-term, and diversified investment strategies.

Building Your Investment Mindset

Learn continuously by reading financial literacy books and news, NSE reports, and company analyses. Take online courses in finance, investing, or economics. Think critically by analyzing businesses, industries, and market trends, and making decisions based on research, not hype. Communicate and network by joining investment clubs or online forums, discussing strategies, and learning from peers and mentors. Manage risks and emotions by developing patience, resilience, and goal- oriented discipline. Plan and execute strategically by crafting a clear investment plan aligned with your purpose, diversifying across asset classes, and reviewing periodically.

Asset Classes to Explore

Shares or equities offer ownership in companies with high growth potential. Real Estate Investment Trusts (REITs) provide indirect property investment with rental income. Government Bonds and T-Bills offer stable, fixed-income returns. Unit Trusts or Mutual Funds provide professionally managed, diversified portfolios. Alternative investments include startups, fintech ventures, or socially responsible projects. National wealth funds, such as Kenya Sovereign Wealth Fund and Norway's Government Pension Fund, demonstrate how strategic, long-term, and diversified investment can create wealth for generations.

"Investing is a journey, not a sprint. Start early, diversify, and stay disciplined."

Practical Steps for Graduates

Open a CDSC or brokerage account and start small. Join learning communities such as clubs, webinars, or online forums. Keep an investment journal to track decisions, outcomes, and lessons. Allocate a portion of your income to investments aligned with purposeful growth. Study national funds like the Kenya Sovereign Wealth Fund and Norway's Fund to learn best practices in long-term, diversified investing. Apply your career insights to spot high-potential opportunities.

The Bigger Picture

By adopting investing as a skill, Kenyan graduates can strengthen local capital markets and reduce dependence on foreign capital. They can build wealth that spans generations, support businesses and ventures that align with personal values, apply lessons from national wealth strategies to guide long-term investment decisions, and enhance transferable skills for career and personal growth.

Final Thought

Investing is more than financial action—it is a mindset, a strategy for purposeful growth, and a path to multi-generational wealth. Kenyan graduates can navigate markets, develop soft skills, and leave a lasting legacy.

"Invest in yourself as much as you invest in the market. Your future starts today."

GEOLOGY: THE BEDROCK OF HUMAN PROGRESS

By Victor Cedric Nganga, 4th Year student, GeTRI

In a world built on touchscreens, wireless signals, and cloud storage, it is easy to forget that everything around us still comes from Earth. A smartphone feels like something invented out of pure human creativity, but at its core is a carefully assembled collection of minerals, metals, and elements mined from the ground. Human history is not just a story of wars and dynasties, it is a story of our evolving relationship with the materials beneath our feet. From the first stone tool to the clean energy systems of tomorrow, geology has quietly built the world we live in today.

You can see that influence right from the way we named our earliest eras. Before humans tracked years with calendars, or kept detailed written history, we tracked our progress through materials we mastered. The Stone Age, Bronze Age, and Iron Age were not symbolic names, they were literal geological milestones. Early humans learned how certain rocks fracture to form sharp edges, how mixing different minerals created stronger metals, and how mastering each new material reshaped daily life. Our ancestors effectively measured time by what minerals they could find, extract, and manipulate. Civilization began the moment we realized we could shape the Earth to our needs, not the other way around.

Jump forward a few thousand years, and the device sitting in your pocket contains more geological diversity than entire ancient civilizations ever encountered. A modern smartphone packs about 60 different elements, each chosen for its unique physical properties. Silicon forms the heart of every processor, rare earth elements like neodymium and dysprosium make tiny but powerful magnets possible. Lithium and cobalt give us lightweight, rechargeable batteries that power modern life. What once took entire lifetimes of exploration sits casually inside your jeans, enabling global communication because we learned how to refine and repurpose the Earth's raw ingredients.

This shift in materials reflects an even deeper shift in what humans consider valuable. In the ancient world, value came from objects–stones,



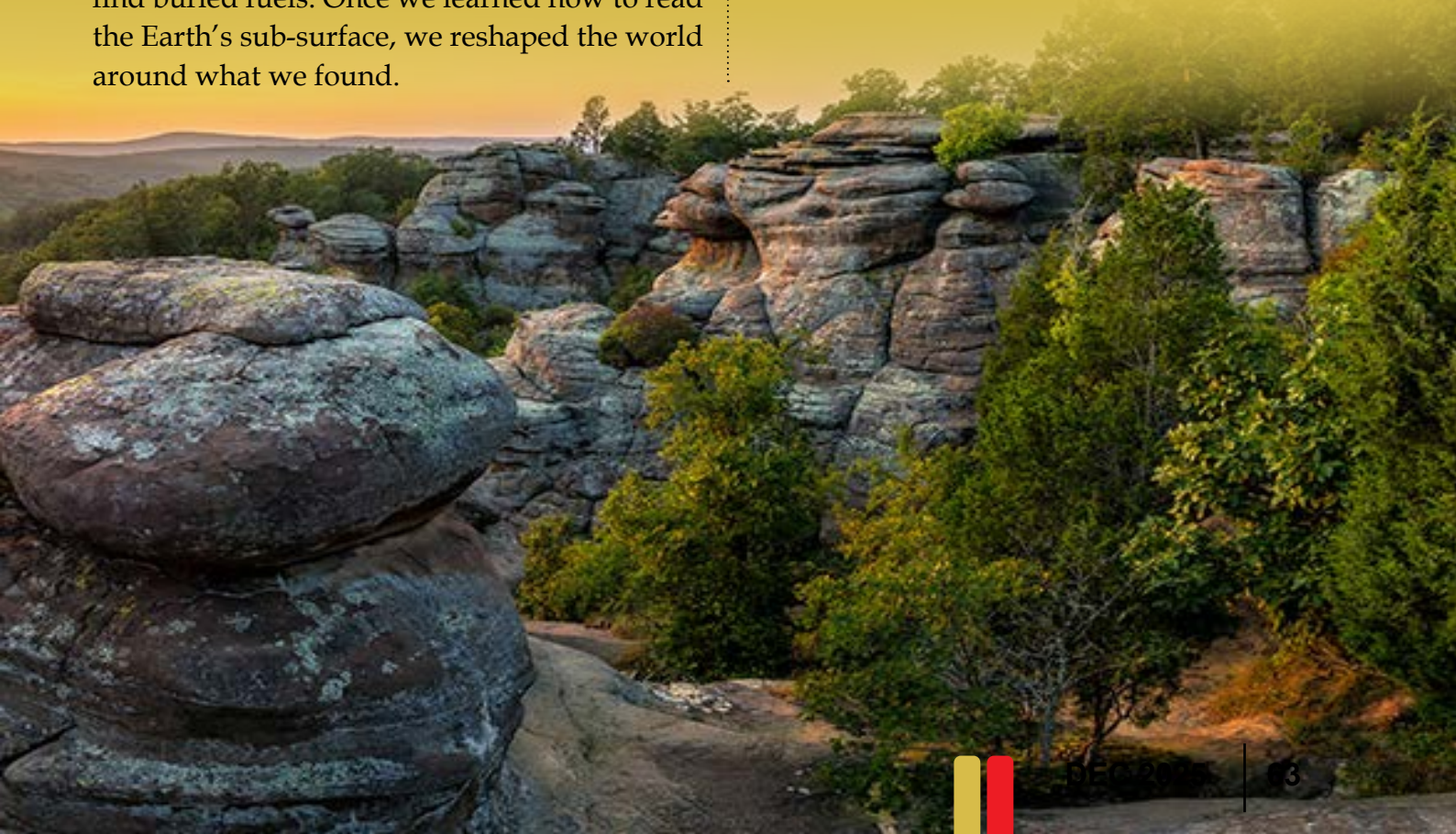
metals, gems, objects you could hold. During the Industrial Revolution, value shifted to stored energy; coal that burned hot, oil that powered engines, gas that heated homes. But today, the most valuable material on Earth one can think of is silicon. The Digital Age is built not on how strong or shiny a material is, but on how it behaves when shaped into microscopic circuits. Nvidia GPUs, Google TPUs, your computer's CPUs, all are built on silicon.

Our discoveries did not change just technology, they changed how civilization is powered. For most of human history, energy came from what we could see and touch on the surface, muscle wind, flowing water, and firewood. Everything changed when we learned to look underground. Coal drove the first major global transformation, the Industrial Revolution, powering steam engines. Oil drove the second, enabling gas-powered engines in automobiles, in aircraft enabling flights, and the most necessary evil of today, modern plastics. But these were not discovered by accident.

They required inventions like seismic exploration, a way to send sound waves deep into the Earth to map hidden structures and find buried fuels. Once we learned how to read the Earth's sub-surface, we reshaped the world around what we found.

Now a new shift is underway. After centuries of digging, drilling and extracting, we are learning to work with the planet rather than simply take from it. Geothermal energy taps directly into the Earth's internal heat, turning natural geological processes into clean power. Carbon capture and storage uses our understanding of underground reservoirs to lock away excess carbon dioxide safely and permanently. Instead of treating the Earth as a vault to empty, we are beginning to see it as a complex system we can partner with, one that offers solutions if we understand how it works.

Taken together, these stories reveal something profound: every major leap in human progress has come from a deeper understanding of the materials under us. We build our cities with metals and stone, power our machines with ancient carbon, and run our digital world on carefully purified silicon. For all our technological brilliance, our progress is still rooted in geology. The ground has always shaped us, quietly, consistently, and completely. And as we move into the future, the next breakthroughs will likely come from the same place, from what we discover when we take a closer look at the Earth itself.





HOW CLAYS ARE USED AS NATURAL GEOTHERMOMETERS IN KENYA'S GEOTHERMAL DRILLING

By Ann Wanjiku Gitau, 4th Year student, GeTRI

Kenya's position along the Rift Valley plays an important role in the geothermal exploration industry. Currently, Kenya has installed a capacity of approximately 985MW, with room for expansion of untapped potential across the Rift Valley by 2030. Success in tapping geothermal energy depends not only on drilling the wells, but also on the geological indicators that reveal the heat beneath our feet. One of the indicators includes clay minerals that form the natural geothermometers and record the thermal history in geothermal areas.

The clays are formed through the interaction of hot fluids and primary minerals, which alters their mineral composition. This process is temperature-dependent, and the altered minerals form clays at different temperatures, making clays a reliable indicator for subsurface temperature conditions. The clays formed include: smectite forms relatively at shallow depths and at temperatures of <220 degrees, mixed-layer illite and smectite form at 180-220 degrees, Illite, chlorite, and epidote form at greater depths and higher temperatures of >220 degrees in productive reservoirs.

Since these clays follow a predictable pattern during transitions, it makes it easier for geologists to identify the change and pinpoint the location of the productive zone in the wells, thereby forming natural geothermometers. The point where smectite transitions to illite forms the top geothermal reservoir, making clay zonation an important exploration tool.

Various techniques are used to study the alterations of clays, such as X-Ray Diffraction (XRD), a common method employed by

geologists to differentiate between clays based on their respective reflective indices. Thin-section Petrography is another method for studying clays, providing visual evidence of the clay textures. In addition to the two methods, geochemical analysis is also employed, which links clay mineralogy to fluid compositions. These are performed on rock cutting from the geothermal wells dug. Combining clay studies with geophysical and geochemical studies facilitates the effective exploration of geothermal energy by developing conceptual models that aim to increase the efficiency of drilling productive zones, thereby saving time and resources.

Major geothermal fields in Kenya, such as Olkaria and Menengai, have adopted the clay zonation method for effective exploration, demonstrating the importance of clay geothermometry. For instance, in Olkaria, they use clays to delineate the productive zones, and in Menengai, they used it in early exploration to produce conceptual models before committing to the actual drilling. This method shows that clays not only provide academic insights but also have direct operational value. Clays acting as natural geothermometers help geoscientists predict reservoir depth and temperature, which increases the potential for successful wells and reduces operational risks.



Our Clays, as natural geothermometers, indirectly contribute to Kenya's broader goals of accurate geothermal targets, leading to more efficient power generation.

Drilling a single well can cost millions of dollars, and mistakes can drain financial resources and cause delays in projects. Clay geothermometry offers a cost-effective way to narrow down drilling targets and mitigate numerous risks. Additionally, monitoring clay mineral changes over time can provide insights into reservoir cooling or chemical shifts, which support long-term sustainability.

Clays, as natural geothermometers, indirectly contribute to Kenya's broader goals of accurate geothermal targets, leading to more efficient power generation. The advancement of clay mineral research strengthens local expertise and trains young geoscientists in clay geothermometry, builds capacity not only for domestic projects but also places Kenya as a knowledge hub for geothermal development across Africa.

Kenya's geothermal success lies in understanding the geological phenomena beneath the Rift Valley. Clay minerals, though minor in various situations, mark the transition from cooler cap rocks to hotter reservoirs, guide exploration, reduce risks, and support sustainable energy development. As Kenya continues to grow and expand its use of geothermal energy, the study of clays will remain indispensable. These silent mineral indicators remind us that sometimes the minute details may carry the greatest weight in powering a nation's future.

CROP YIELD OPTIMIZATION: AN EARLY WARNING SYSTEM SOLUTION FOR MURINGATO MAIZE FARMERS

By Elizabeth Muraya, Kuria B. Thiong'o, PhD
Remote Sensing Research Group



Figure 1 Remote Sensing Research Group on a Fieldwork in Muringato with a farmer.

Efforts geared to increase food security and sustainability in Kenya due to climatic change and weather patterns have been top of priority in the country. The **MC2FM Project**, funded by the German Federal Ministry of Education and Research (BMBF) - 01DG24001 and titled "**Participatory approach to Climate Change Mitigation and Forest Restoration in the Muringato Catchment**" seeks to address the challenges faced by small scale farmers of obtaining reliable and timely information regarding weather variability which in turn leads to low crop yields.



Figure 2 Muringato Catchment Small Scale Farmers Early Warning System Interface

The proposed solution approach focuses on the development of an **Early Warning System (EWS)** for monitoring maize crop yields in the Muringato Catchment area. This approach aims at fostering the achievements of Sustainable Developments Goals (SDG's) including Goal 2 on Zero hunger and Goal 13 on Climate Action. The EWS will draw data from satellite imagery for the identification of the maize fields from 2019 to 2024, soil moisture data for the corresponding identified maize fields, farm management practices on the identified maize fields which entail various practices include spraying of pesticides, fertilizer application and irrigation. The output of the EWS shall then be validated by fieldwork activities scheduled throughout the study period.

Further, GIS & Remote Sensing will be integrated with Machine Learning techniques to optimize the estimation of the maize crops' soil moisture critical threshold influenced by the varying weather conditions within the catchment. The results of these will be presented on a Web-based GIS Application which will alert the target farmer via SMS indicating the current soil moisture levels as well as necessary measures that could be undertaken.

This includes but not limited to irrigation to optimize crop yield production hence ensuring food security in the catchment and value in the small-scale farmers harvests.



Figure 3 The developed interactive crop monitoring vegetation indices page .

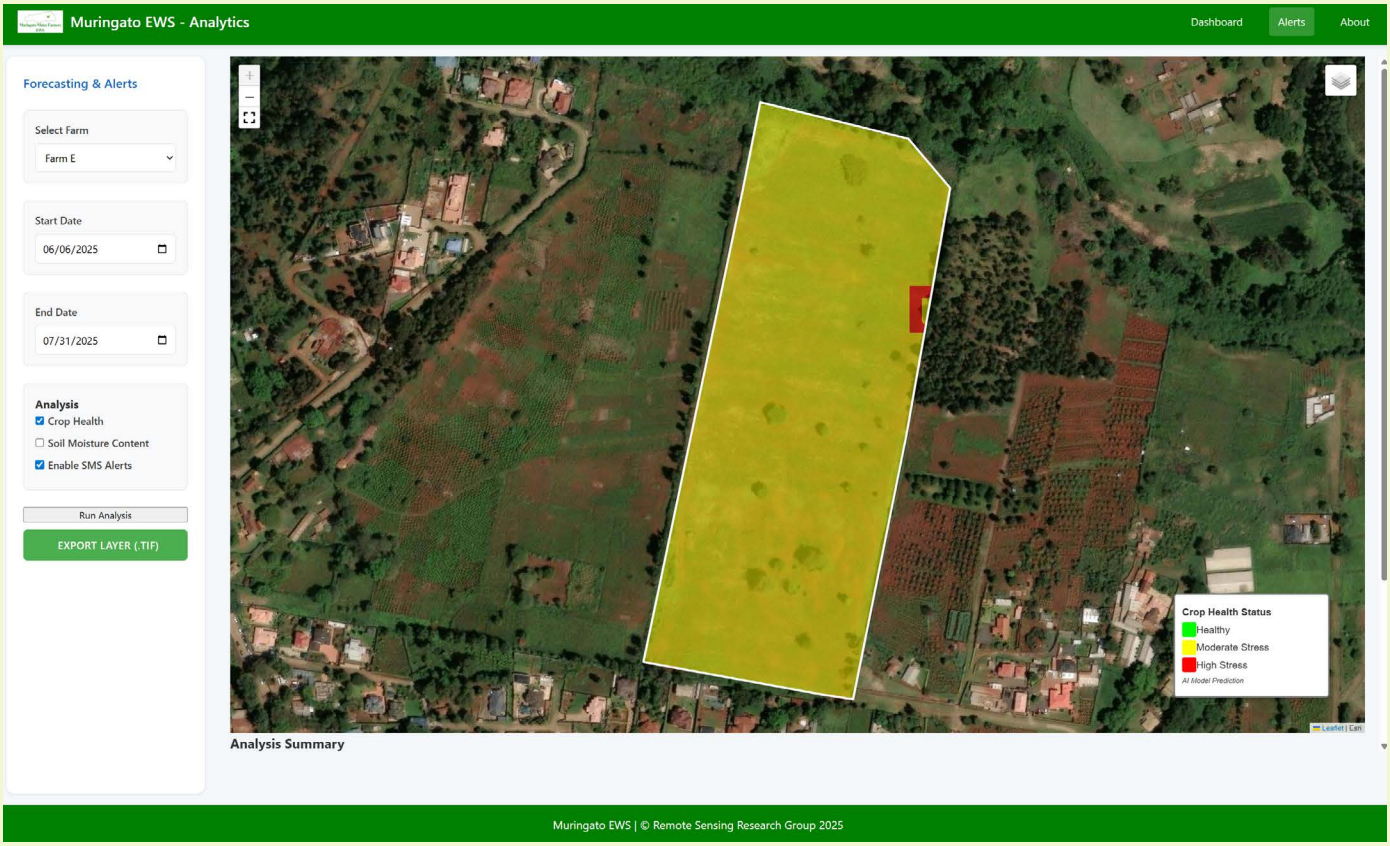


Figure 4 Maize crop health monitoring at DeKUT test farm

The success of this initiative will hinge on active collaboration between researchers, policymakers, and the local farming community. A participatory approach has been adopted in data collection within the catchment, ensuring that farmers' experiences and insights are integrated into the system design. Farmers have been actively involved in the research process, contributing valuable knowledge about traditional farming practices, soil conditions, and rainfall patterns. By incorporating their input, the project ensures that the Early Warning System is tailored to meet the specific needs of Muringato maize farmers, making it a practical and sustainable solution.

HARNESSING DRONE TECHNOLOGY FOR SMARTER TREE MANAGEMENT

By Brian Kibet Cheruiyot, Kuria B. Thiong'o, PhD

Remote Sensing Research Group, Centre for Spatial Information Science and Systems (CSISS), Institute of Geomatics, GIS and Remote Sensing (IGGReS)

As environmental conservation becomes an urgent global priority, understanding vegetation dynamics has become essential for climate resilience, biodiversity protection, and sustainable landscape management. Dedan Kimathi University of Technology, through its Remote Sensing Research Group (RSRG), is at the forefront of these efforts, leveraging state-of-the-art geospatial technologies to promote informed environmental stewardship.

At the Institute of Geomatics, GIS and Remote Sensing (IGGReS), innovation continues to shape cutting-edge research aimed at supporting sustainable ecosystems. Among its flagship initiatives, the RSRG has pioneered an advanced tree monitoring program that is transforming how tree health and growth are assessed within the University's landscape.

Since February 2025, the RSRG has conducted monthly drone-based monitoring at the DeKUT Arboretum *(Figure 3)*. Using a DJI Mavic Enterprise equipped with multiband imaging sensors *(Figure 1; left)*, the team captures high-resolution aerial data used to generate monthly Normalized Difference Vegetation Index *(NDVI, Figure 2)* – key indicator of plant vigor and stress.



Figure 1: (Left) *A drone pilot launching a drone;* ***(Right)*** *labels placed at DeKUT RSRG Arboretum*

Each map serves as a snapshot of the arboretum's ecological state, enabling early detection of changes in tree health, assessment of growth patterns, and identification of potential environmental stressors.

All processed datasets are stored and visualized within the Integrated Tree Management System (ITMS), a digital platform overseen by RSRG. Through interactive dashboards, students, researchers, and environmental managers can explore tree-level information and track vegetation trends over time.

Accessible through the RSRG portfolio (https://iggresserver.dkut.ac.ke/CSISS/RSRG/portfolio-details-ITMS.html), the ITMS reinforces DeKUT's commitment to smart, technology-driven environmental management.

This work forms part of the **MC2FM Project—"Participatory Approach to Climate Change Mitigation and Forest Restoration in the Muringato Catchment"**—a collaboration between DeKUT and Ruhr University Bochum (RUB), Germany. The initiative is funded by the German Federal Ministry of Education and Research (BMBF), whose support has enabled the integration of participatory environmental monitoring with advanced geospatial technologies.

Through continuous monitoring and data integration, the Remote Sensing Research Group is laying a strong foundation for long-term ecological stewardship at DeKUT. This initiative not only strengthens the University's green infrastructure but also provides a real-world learning environment where modern geospatial technologies are applied to address pressing environmental challenges, cementing DeKUT's position as a regional leader in remote sensing innovation.

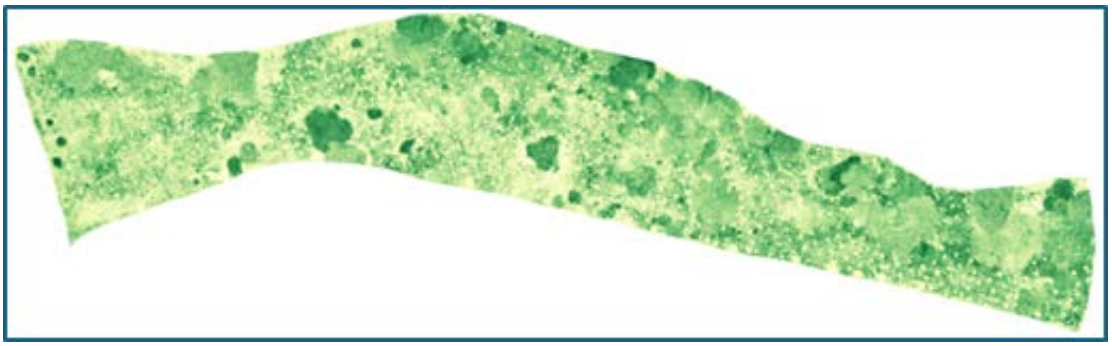


Figure 2: *Normalized Difference Vegetation Index Map*



Figure 3: *The Remote Sensing Research Group Arboretum*

FROM SPACE TO STEWARDSHIP: TEACHING KIDS TO SAVE THE PLANET

By Peter N. Thuku, Ivan Kipruto, Martin W. Chege, Catherine Njore, Kuria B. Thiong'o PhD
Remote Sensing Research Group (RSRG), Centre for Spatial Information Science and Systems (CSISS), Institute of Geomatics, GIS and Remote Sensing (IGGReS)

Education is often underemphasized in the fight against climate change. While policy changes are crucial, equipping the next generation with knowledge and tools to understand environmental challenges is the critical first step. Research shows that early environmental education builds children's connection to the natural world, fostering responsible lifestyles and eco-innovation. When young learners engage with real-world technology like satellite imagery, they don't just learn—they develop the critical thinking and problem-solving skills needed to become tomorrow's environmental stewards and advocates for sustainable change.

On 8th and 9th September 2025, researchers from the Remote Sensing Research Group (RSRG) under the **MC2FM Project** titled "**Participatory approach to Climate Change Mitigation and Forest Restoration in the Muringato Catchment**", a collaboration between DeKUT and Ruhr University Bochum (RUB), and funded by the German Federal Ministry of Education and Research (BMBF) – (Grant no. 01DG24001), launched the Remote Sensing for Environmental Conservation education (RSECed) initiative.

The initiative targeted Grade 8 learners-aged 12-14 years-selected for their cognitive readiness to grasp classroom geospatial concepts for environmental conservation and their position at a critical juncture before transitioning to junior secondary education. Four schools (*Figure 1*) within the Muringato Catchment were strategically selected based on feedback received from a past engagement: Ikumari Primary School (48 learners, 24.5%), Muringato Primary School (37 learners, 18.8%), Chania Primary School (55 learners, 28.1%), and Mary Immaculate Academy (56 learners, 28.6%) - totaling 196 participants with nearly balanced gender representation (52% male, 48% female).

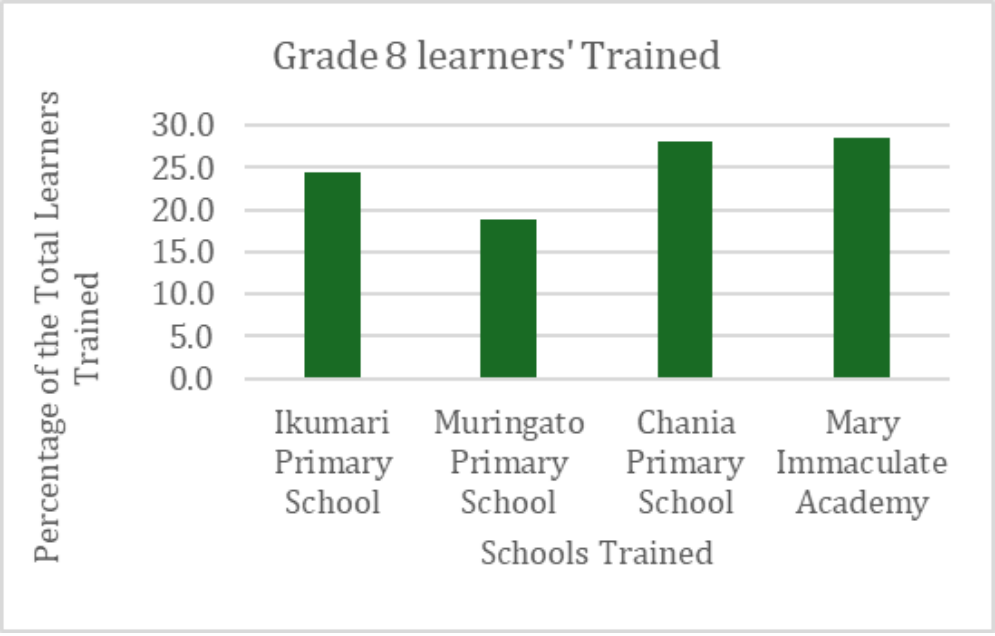


Figure 1: *Percentage of leaners trained across the 4 schools*

Two digital tools—the Land Use Classification Game and EcoScope Pro (*Figure 2*)—that brought Google Earth Engine into primary classrooms were created. Learners explored real satellite imagery, tracking vegetation health, forest loss, and land use patterns in their own county.

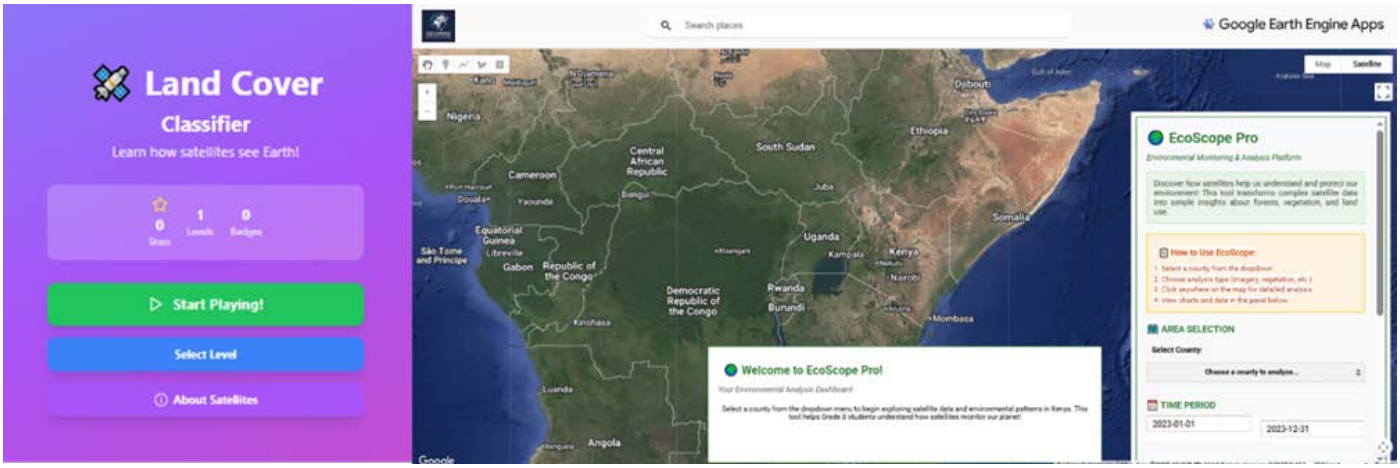


Figure 2: *The Land Use Classification Game and EcoScope Pro Tool*

To quantify learning outcomes, the team administered structured pre- and post-training assessments across all participating schools. Before the workshops, learners were asked to indicate their understanding of key concepts by raising hands or responding to questions. Understanding rates were calculated as the percentage of learners demonstrating comprehension out of the total 196 participants. This same assessment framework was applied after the training sessions, enabling direct comparison of knowledge gains.

The results were transformative. Within the two-days workshops, satellite remote sensing understanding jumped from 6.1% to 73.5%. Conservation awareness reached 81.6%, and 96.4% of learners preferred these interactive tools (*Figure 3*), over traditional hardcopy methods. The success of RSECed initiative proves environmental education can start at an early age.

By integrating STEM with real-world technology, DeKUT is cultivating future leaders equipped to tackle climate challenges. Some of these learners may return as university students, bringing a foundation in geospatial technology that began in primary school.

ADVANCING URBAN FOREST MANAGEMENT THROUGH AI-POWERED TREE SPECIES IDENTIFICATION

By Ivan Kipruto, Kuria B. Thiong'o

Remote Sensing Research Group (RSRG), Centre for Spatial Information Science and Systems (CSISS), Institute of Geomatics, GIS and Remote Sensing (IGGReS)

In the evolving landscape of environmental conservation and urban forestry management, the integration of artificial intelligence with geospatial technology is revolutionizing how we monitor and manage our green spaces. Accurate tree species identification is fundamental to effective arboretum management. Traditional manual identification methods, while reliable, are time-intensive and require specialized botanical knowledge, creating bottlenecks in data collection and delaying critical maintenance decisions. We have developed an advanced deep learning model for automated tree species identification, further enhancing the capabilities of both the web-based platform and mobile field data collection tools, enabling them to provide instant species identification without requiring specialized botanical expertise.

This AI-powered system significantly enhances arboretum management efficiency by reducing identification time to seconds, enabling field teams to document more trees and accelerate restoration monitoring.

Leveraging state-of-the-art deep learning technology, we developed a Convolutional Neural Network based on the EfficientNet-B0 architecture to automatically identify tree species from photographs. The model was trained on a comprehensive dataset of seventeen (17) indigenous tree species being grown in the DeKUT arboretum. The development process involved careful data preprocessing, including image augmentation techniques such as rotation, shearing, and blurring to enhance model robustness under varying lighting conditions and camera angles. After 50 training epochs using the AdamW optimizer, the model achieved an impressive 96% accuracy on validation data, demonstrating its reliability for real-world field applications.

The trained model has been seamlessly integrated into two complementary platforms. The ITMS web platform (https://iggresserver.dkut.ac.ke/RSRGA_ITMS/home/) now features an intuitive upload interface where users can submit tree images for instant identification, with the system displaying predicted species and confidence levels (*Figure 1*). Simultaneously, the Android-based Field Data Collection mobile application provides real-time species identification directly in the field through an integrated camera interface, delivering immediate results with confidence scores and alternative matches when uncertainty is detected (*Figure 2*).

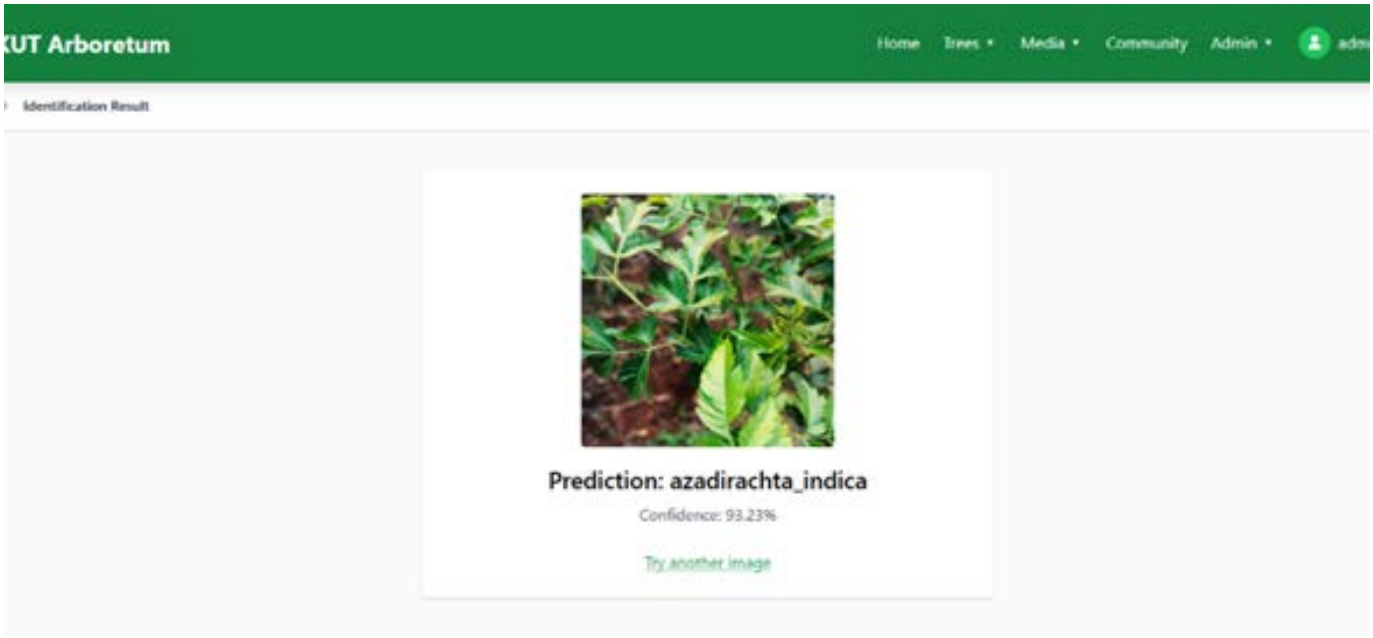


Figure 1: *Tree Species Identification model integrated into the DeKUT Arboretum Interactive Tree Management System*

This AI-powered system significantly enhances arboretum management efficiency by reducing identification time to seconds, enabling field teams to document more trees and accelerate restoration monitoring. The confidence scores help flag uncertain identifications for expert review, improving data quality while maintaining automation benefits. The system's modular design allows for future expansion as new species are introduced.

This project exemplifies the synergy between technology and environmental stewardship envisioned by the **MC2FM Project** titled "**Participatory approach to Climate Change Mitigation and Forest Restoration in the Muringato Catchment**", a collaboration between DeKUT and Ruhr University Bochum (RUB), and funded by the German Federal Ministry of Education and Research (BMBF) - (Grant no. 01DG24001). By combining geospatial data management with artificial intelligence, we are creating a comprehensive ecosystem for urban forest management that serves both the immediate needs of the DeKUT Arboretum and provides a template for similar initiatives in other institutions and conservation areas. The marriage of AI, mobile technology, and web-based platforms demonstrates that innovation in environmental management is about making data more accessible, actionable, and meaningful for those working to protect our natural heritage.

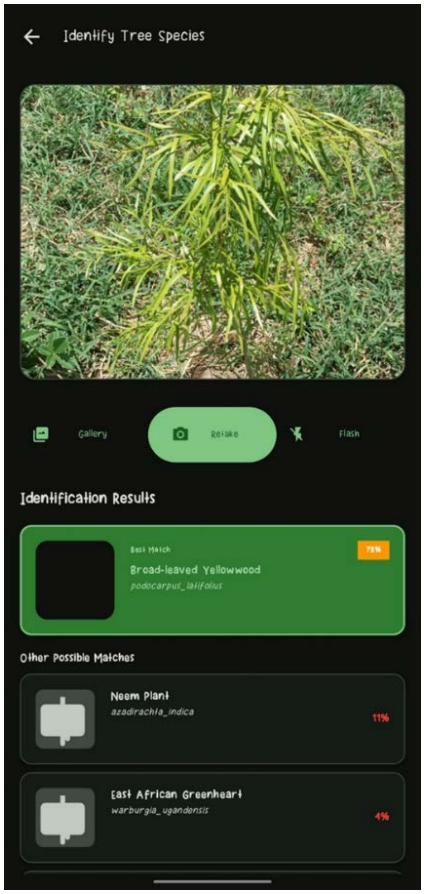


Figure 2: *Tree Species Identification Model integrated into the DeKUT Arboretum Field Data Collection Mobile Application*

THE THRILLING JOURNEY OF SUCCESS AT IGGReS: BEYOND MAPS, MINDS, AND MILESTONES

By Nixon Kiprop Talam, 5th Year GeGIS, Graduate Student

If someone had told us five years ago that tiny triangles, dense point and countless troubleshooting victories would define our unforgettable IGGReS Journey.

When Theodolites Looked Like Ancient Artifacts

Our journey began with the basics very basic. The first time we saw a theodolite, most of us squinted at it like archaeologists who had just dug up a relic from the Stone Age. Little did we know that these "ancient gadgets" such as theodolites (Figure 1) would be the foundation of everything. We learnt the traditional methods first: pacing, leveling, booking measurements manually, and carrying tripods that somehow always got heavier with each practical. But that is how IGGReS works, you start with the roots before you climb the technological tree.



Figure 1: Theodolite

The Big Transition: Welcome to GNSS Receivers and Total Stations

Then came the moment every student dreamt of switching from traditional tools of tapes to personal computers advanced technology such as Total stations, RTKs of GNSS receivers and Digital theodolites. Suddenly, surveys that once took the whole day were finishing before lunch. We felt like superheroes equipped with laser beams and satellites. And of course, there was always that one person who pretended to "adjust" the Total Station while secretly fixing their hair in the instrument lens. Every class had one and yes, we know who you are.

Developing a Strategic Understanding of GIS

Somewhere in between field traverses and level loops, GIS swept into our lives like a quiet genius. It opened our eyes to real-world applications, environmental monitoring, urban planning, disaster management, water resource management, wildlife conservation, you name it.



Figure 2: GIS interface

One of the greatest gifts IGGReS offered us was exposure. Career days where we showcased surveying instruments and GIS innovations. Conferences and events where we networked with professionals.

Suddenly, we weren't just students. We were problem-solvers looking at life in layers literally.

A Campus Full of Opportunities

One of the greatest gifts IGGReS offered us was exposure. Career days where we showcased surveying instruments and GIS innovations. Conferences and events where we networked with professionals. Workshops that pushed us to think beyond the ordinary. For many of us, myself included, these events opened doors, sparked curiosity, and gave us a clearer picture of how rapidly geospatial technologies are evolving. Through it all, we grew. We matured. We became better versions of ourselves academically, socially, and professionally.

The Final Chapter: Leaving Better Than We Came

As we stand at the edge of graduation, one thing is clear: We carry skills, confidence, networks, memories, and stories worth telling. This journey has shaped us-the future engineers, surveyors, GIS experts, mapping specialists, innovators, and leaders of tomorrow. And yes, we will always remember that one classmate who carried the tripod like it was a baby and the one who could never find the North direction even with a compass.

IGGReS Has Been More Than a School It Has Been a Story.

A story we lived.
A story we grew through.
And a story we will forever carry with us.

This journey has shaped us-the future engineers, surveyors, GIS experts, mapping specialists, innovators, and leaders of tomorrow. And yes, we will always remember that one classmate who carried the tripod like it was a baby and the one who could never find the North direction even with a compass.

THE RISE OF AI, SMART TECHNOLOGIES IN GEOMATICS ENGINEERING, GIS AND REMOTE SENSING: SHAPING THE FUTURE OF SPATIAL INTELLIGENCE

By Timothy Mulongo, Fifth-year student, IGGReS

Artificial Intelligence (AI), smart technologies, and Remote Sensing (RS) are revolutionizing Geomatics Engineering, GIS and Remote Sensing. These innovations are transforming how we collect, analyze, and apply spatial data, making maps smarter, cities more efficient, and environmental monitoring faster and more accurate. Today, the field goes beyond traditional surveying; it combines autonomous drones (*Figure 1*), satellites, LiDAR, programming, and AI-driven analytics to understand and manage our world like never before. Interesting Fact: Over 80% of modern apps, including navigation, weather, and delivery services, rely on geospatial intelligence and remote sensing data.

AI-Powered Drones and VR-Enhanced Surveying

Modern surveying integrates UAVs, drones, satellites, and LiDAR sensors to capture high-resolution spatial data, which AI and machine learning algorithms process to automatically detect roads, buildings, vegetation, water bodies, and land cover changes with remarkable accuracy. Remote Sensing further enhances this by providing continuous monitoring of forests, rivers, coasts, and urban growth, allowing surveyors to map hundreds of hectares in a single UAV flight—a task that previously took weeks manually. Today, with VR headsets and AI-powered drones, surveyors can pilot drones remotely in Immersive 3D environments, control flight in real time, and even automate complex data collection tasks using intelligent drone swarms.



Figure 1: Shows How VR headsets are used to control drones



Figure 2.: Shows an image from the Esri website showing one of the many projects they have done as far as smart cities is concern in America

Programming and Spatial Data Science

Programming has become the superpower of modern geomatics. Using tools like Python, R, MATLAB, and powerful libraries such as TensorFlow, PyTorch, GDAL, and scikit-learn, geospatial professionals can turn raw satellite images and drone data into smart, predictive maps. Machine learning models can forecast urban growth, map flood risks before disaster strikes, detect deforestation in real time, and even simulate how cities will evolve in 3D and 4D over the next decade. Essentially, programming transforms spatial data into a living, dynamic intelligence system, helping us understand, plan, and interact with the world like never before.

Smart Cities and Real-Time GIS: Designing the Cities of Tomorrow

The cities of the future are alive with data, and Smart Cities (*Figure 2*) rely on AI-powered GIS, IoT sensors, and remote sensing to make urban life more efficient, sustainable, and resilient. Real-time dashboards collect data on traffic flow, energy usage, water distribution, and air quality, while 3D and 4D GIS models allow planners to simulate sunlight, airflow, and building shadows before construction begins. Machine learning predicts congestion hotspots, flood-prone zones, and energy demand, turning raw data into actionable intelligence.

Geospatial Economy

The geospatial economy - the economic value generated from geospatial data, GIS, remote sensing, and AI - is rapidly emerging as one of the fastest-growing and most transformative sectors worldwide. Beyond traditional mapping, geospatial intelligence now underpins a wide array of industries, helping businesses and governments make data-driven decisions that optimize resources, improve efficiency, and enhance sustainability. The sector is growing rapidly, fueled by advances in AI, machine learning, cloud computing, and real-time data collection. Geospatial professionals now have the tools to turn raw satellite imagery, drone surveys, and sensor data into actionable insights, enabling innovation, improving efficiency, and supporting smarter decision-making across multiple fields.

Celebrating a Decade of Achievements

Over the past ten years, geomatics engineering, geospatial technologies and Remote Sensing have undergone a remarkable transformation. What began as traditional surveying and mapping has evolved into a dynamic field powered by AI, machine learning, UAVs, and Remote Sensing. Today, professionals can capture, analyze, and visualize spatial data like never before, enabling smarter cities, sustainable land management, and innovative solutions for agriculture, disaster response, and infrastructure planning.

Opportunities for First-Year Students in Geospatial Sciences

The geospatial field offers diverse and in-demand career paths. Graduates can work as GIS developers, remote sensing analysts, urban planners, drone mapping specialists, or data scientists, applying AI, machine learning, and GIS to solve real-world challenges. They can also work as surveyors. Government projects, such as digitizing land records, Affordable Housing and building GIS-based land management systems, provide opportunities in land administration, urban planning, and resource management, while private firms leverage geospatial intelligence for agriculture, logistics, and environmental monitoring etc.

Conclusion

Finishing my journey in Geomatics and GIS has shown me that this is not just a technical course—it is a field full of exciting applications, endless career opportunities, and a chance to shape the future. From AI-powered drones and remote sensing to smart city planning and land administration, the skills you gain open doors to diverse roles, from urban planners and GIS developers to drone mapping specialists and geospatial data scientist.



A JOURNEY OF PURPOSE, SERVICE AND TRANSFORMATION

When I reported to Dedan Kimathi University of Technology on 5th September 2022 to begin my Bachelor of Commerce in Finance, I walked in with a simple aspiration: to learn, to grow, and to discover who I could become. What I found over the years was far greater than an academic experience. It was a journey of transformation that shaped my character, worldview, leadership, and purpose.

My early days in campus were centered on adjusting to university life and building a solid academic foundation. With time, I discovered a deep calling towards mentorship, student wellness, and community service. This turning point came when I enrolled for the annual training of Peer Counsellors organized by the Directorate of Students Welfare. The training introduced me to mental health advocacy, GBV prevention, ethical leadership, exam integrity, and peer mentorship. It ignited a passion in me to support others and contribute to a healthier, safer student community. From this moment, my path became clearer. I joined the Alcohol, Drugs and Abuse (ADA) Peer Educators Program and later took up an active role in University sensitization activities including mental health campaigns, workshops, candle lighting ceremonies, and coffee hours. I eventually had the honour of being elected Chairperson of Peer Counsellors, a role that allowed me to work closely with the Counselling Department and the Directorate of Students Welfare. Through this partnership, I participated in organizing major University events such as the Annual Health Week, Mental Health Week, capacity-building forums, and volunteering during official University functions, including graduation ceremonies. These experiences taught me the value of empathy, responsibility, and service to others.

My early days in campus were centered on adjusting to university life and building a solid academic foundation. With time, I discovered a deep calling towards mentorship, student wellness, and community service. technical abilities.

As my journey unfolded, so did new leadership opportunities. I was nominated and served as the Vice Chairperson of the Electoral Commission of DeKUT, a position that entrusted me with upholding transparency and accountability in student governance. This role deepened my understanding of institutional integrity and strengthened my commitment to ethical leadership. Alongside these responsibilities, my exposure grew through participation in national and international engagements where I proudly represented the University. I took part in the Nairobi Summer School on Climate Justice, Blue Economy debates at the Technical University of Mombasa, and the Kampala Geopolitics Conference at Makerere University, where I also visited the source of the Nile. I further advanced my global engagement as a member of the Children and Youth Major Group to UNEP, participating in high-level spaces such as the United Nations Habitat Assembly, the Global Youth Environmental Assembly, and sessions of the Committee of Permanent Representatives. These platforms expanded my worldview and connected me with leaders and young changemakers from around the globe.

I leave DeKUT not only with academic knowledge but with confidence, exposure, values, and a renewed commitment to serve society with integrity and purpose.

The year 2024 stands out as one of the most rewarding chapters of my university life. I was honoured with the President's Award Gold Award for community service and personal development, presented at State House. Later that year, I received the Vice Chancellor's All-Round Student Award, recognizing excellence in balancing academic work with co-curricular involvement; a moment that reaffirmed the value of consistency and commitment.

My final year began with an enriching academic visit to the University of Dar es Salaam in Tanzania, where I interacted with students and broadened my regional networks. Shortly after, I was nominated by the African Union to attend the 11th Africa Regional Forum on Sustainable Development (ARFSD) in Kampala, Uganda, an opportunity that allowed me to connect with experts, leaders, and youth from across the continent. Throughout the year, I continued supporting youth development initiatives and mentorship activities while maintaining a strong focus on my academic responsibilities.

As I prepare to graduate today on 19th December 2025 with a Second-Class Upper Division Honors, I reflect with immense gratitude on the people and institutions that shaped my journey. The Directorate of Students Welfare, the Counselling Department, the social workers, my lecturers, colleagues, and friends, each contributed to my growth in profound ways. I leave DeKUT not only with academic knowledge but with confidence, exposure, values, and a renewed commitment to serve society with integrity and purpose.

My years here have been deeply enriching. I have grown, learned, unlearned, and discovered new strengths within myself. As I step into the next chapter, I carry with me every lesson and every experience that has made this journey meaningful. DeKUT has prepared me not just for a career, but for life and for that, I am truly grateful.

MY JOURNEY AT DEDAN KIMATHI UNIVERSITY OF TECHNOLOGY: THE EXPOSURE, OPPORTUNITIES AND GROWTH

By Valerie Anyango Olali

When I first joined Dedan Kimathi University of Technology, I knew I wanted to grow academically but I did not realize just how many doors would open for me beyond the classroom. From my very first year, I found myself exposed to opportunities that challenged me, inspired me, and shaped the person and engineer I am becoming. One of the most transformational parts of my experience has been my involvement in IEEE, a global community of innovators. Through this platform, I have attended high-impact technical events, interacted with industry professionals, visited specialized labs, and participated in leadership retreats that broadened my perspective far beyond the lecture halls. What I have gained, skills, confidence, networks, and hands-on experience is something any student at DeKUT can achieve. You do not have to hold a leadership position or be a top student; you simply need curiosity, willingness to participate, and the passion to grow. DeKUT offers an environment where students are not only taught, but empowered. Whether through professional societies, innovation hubs, specialized workshops, or student organizations like IEEE, everyone has a chance to discover their potential. Looking back, I realize that joining DeKUT did not just give me a university education—it gave me exposure, opportunities, and a community that has shaped my journey in ways I never expected. When I walked into my first IEEE event, I had no idea how much the journey ahead would transform me—both as an engineering student and as a leader. What began as simple curiosity soon unfolded into a year filled with discovery, meaningful connections, technical exploration, and unforgettable moments.



Participating in the IEEE Xtreme competition was another memorable moment. Although I joined as a beginner, the experience taught me how to approach and solve competition-level programming questions, giving me new confidence in my technical abilities.

Some of the exposure I gained through my involvement in IEEE

My IEEE journey has been deeply transformative, giving me exposure far beyond the classroom. TechX Nyeri remains one of the most defining experiences—an inspiring mix of industry keynotes, student innovations, and competitive showcases. Serving in the Finance Committee strengthened my skills in budgeting, accountability, and event coordination, while the Mechatronics Lab visit fueled my excitement for hands-on engineering. Presenting my project, '*BloomIQ*', boosted my confidence as a young innovator. The SAC Chairs' Retreat further shaped my leadership journey. Though I attended as the Student Branch Treasurer, the retreat broadened my perspective, offering meaningful conversations with other leaders and a refreshing space for learning and reflection.

A major milestone for our branch was the launch of the SPS, CS, and RAS societies—new gateways for research, specialization, and international collaboration. Celebrating Women in Engineering also reminded me of the importance of representation, mentorship, and creating supportive spaces for women in STEM.

Participating in the IEEE Xtreme competition was another memorable moment. Although I joined as a beginner, the experience taught me how to approach and solve competition-level programming questions, giving me new confidence in my technical abilities.

We also shared lighter moments, such as the Photonics Society Goat Eating—an event filled with bonding, laughter, and genuine camaraderie, showing that IEEE is as much a family as it is a technical community. Looking back, IEEE has been more than a professional organization to me—it has been a space of learning, leadership, innovation, and personal growth.

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A REFLECTION ON MY LEADERSHIP JOURNEY IN GENDER AND DISABILITY MAINSTREAMING

Chelsea Agani, Gender & Disability Mainstreaming Secretary, DeKUTSO 2024/2025, BSc. Food Science & Technology (Year 4)

As I complete my fourth year at Dedan Kimathi University of Technology, I reflect with deep gratitude on the journey that leadership has allowed me to walk. Serving as the Gender and Disability Mainstreaming Secretary in the Dedan Kimathi University of Technology Students' Organization has been one of the most transformative parts of my university experience. It has given me the privilege to interact with diverse groups of students, the administration, and stakeholders who continually shape our campus community.

In my term, I focused on creating supportive, inclusive and safe spaces for all students, especially student parents, students with disabilities, and the empowered ladies and gentlemen of the University. Through several initiatives, we worked together to ensure that no one felt left behind. We held impactful trainings and engagements such as open talks for both ladies and gents, the Pre-Valentine sensitisation forum, and gender-based violence (GBV) awareness sessions, ranging from a one-day training to a major three-day program, followed by consistent monthly follow-up meetings.

I also coordinated special topics and conversations within the ladies' WhatsApp groups, creating a platform where young women could learn, share, and grow.

Beyond campus, I was honoured to represent students in important platforms such as the Health Forum targeting Nyeri County and *Jukwaa la Wasomi* on security matters contributing to broader conversations that affect young people.

Among the most fulfilling parts of my service was supporting student parents. Through monthly meetings, we provided a space for them to share their experiences, receive guidance, enjoy fellowship over a shared meal, and benefit from essential items sourced through donations. These students continue to inspire me with their resilience as they balance academics, parenting, and financial demands. I hope this program continues to grow with even more support from our community. For students with disabilities, we organized meetings and games to encourage their active participation in university life. We empowered them to seek opportunities and to believe in their ability to lead and influence. A major Disability Day is scheduled for January, and it stands as a testament to our collective commitment toward inclusivity at DeKUT.

I finished my term carrying with me invaluable lessons, compassion, service, patience, and the courage to advocate for others. I am proud of the strides we made together and grateful to everyone who supported these initiatives. My hope is that the spirit of inclusivity, empowerment, and service continues to thrive in DeKUT for years to come.

Better Life Through Technology – Better Lives Through Service.



HOW A 5-DAY EXPEDITION TO MT KENYA REDEFINED MY DeKUT STORY

By Carringtone Nakitari, BSc. Information Technology

I never thought I would be the person who climbs mountains. I was the kid who wrote fake asthma notes to escape PE because "running is suffering." Yet, here I was, standing at the foot of Mt. Kenya on a cold October morning, and I caught myself whispering, "*How did I get here?*" Just a few months earlier, I was doom scrolling, watching someone celebrate their summit. Something in that moment ignited me. I paused, looked at the snowy crown of the mountain visible from campus, and said aloud, "*I can do that.*"

When my lecturer, Mr. Wachepele, returned from Season 8 Expedition 18 of the Climb to Educate (C2E) program glowing like he had seen heaven and told me, "*Season 9, usiachwe nyuma*", I knew the decision had already been made. What I did not know then was how profoundly that decision would reshape my year, my mindset, and my identity.

Preparing for the Mountain

Training quickly evolved from a schedule into a lifestyle. Every Monday, Wednesday, and Friday, the Challenge Course became our second home burpees, sprints, core sessions, gear checks, and outdoor classes on everything from tent pitching to altitude sickness. Team Wakimbizi: Nicole, Joe, Muchina and I added our own 5 a.m. sunrise runs. Some mornings we jogged, other mornings we walked half the route, but the sight of Mt. Kenya's glowing peak kept us moving.

Packing was its own comedy. No amount of YouTube research could teach me how to balance an 18 kg backpack. That struggle became my unofficial initiation into expedition life. By October, the excitement across campus was unmistakable. The mountain was not just a geographical landmark anymore; it was calling us by name.

Day 1: From DeKUT to Old Moses – The Beginning

The Vice Chancellor, Prof. Eng. Peter Muchiri, flagged us off at the DSW offices. The atmosphere was electric, songs, laughter, nervous smiles, and the weight of anticipation that had built over months. When we finally reached Sirimon Gate, everything suddenly became real. The hike to Old Moses was gentle at first, then rainy, and cold. By evening, my tent pitched on a slope turned sleep into a sliding challenge. Nevertheless, discomfort could not overshadow the thrill. It was my first night on the mountain, and I felt ready for anything.





Day 2: Shipton – Where the Mountain Shows Its True Face

Day 2 stretched us physically and mentally: 18 km of ascent and nearly 900 m of elevation gain. My backpack felt like it was carrying my entire life plus regrets. Meanwhile, porters, superhuman in every sense, flew past us with 25 kg loads as if they were carrying feathers. But Mackinder's Valley made every step worth it. Streams cutting through the open plains, jagged peaks framing the sky, air so clean it almost stung, this was the kind of beauty that rewires something inside you. By the time we reached Shipton Camp, tucked beneath the towering peaks, I was exhausted, sunburned, but undeniably proud. That night, as rock hyrax shuffled outside the tents, I lay awake wondering: *Could I really reach the summit?*

Day 3: Reaching Harris Tarn – 4,750 m of Truth

Summit day was not supposed to be summit day. It was planned as an acclimatization walk, but ambition got the better of us, and we pushed for Point Lenana. The trail was brutal, slippery scree, biting cold, numb fingers despite gloves, and oxygen that felt like it was rationed. Yet we moved together, singing Christmas carols for no reason, laughing through the struggle, encouraging one another step by step.



When we finally reached Harris Tarn 4,750 m above sea level and just 235 m shy of Lenana, the weather turned. The guides made the call: turning back was the only safe option. For a moment, disappointment punched hard. Then I looked around frozen lake edges, clouds swirling below us, my friends shouting in celebration, and something inside me cracked open. I could not stop smiling, full of joy and Gratitude. Standing there, holding the Nairobi Marathon medal I had carried all the way up, I realized this was my summit. I was the first in my lineage to reach that altitude. That alone was a victory. I was unstoppable.





Days 4–5: The Descent and the Homecoming

Walking back through Mackinder's Valley felt like saying goodbye to a friend. The landscapes looked softer now as if the mountain was proud of us. Old Moses felt almost like home when we returned. And on Monday morning, while descending the final 9 km to Sirimon Gate, we practically ran, singing until our voices cracked. Arriving back at DeKUT to a warm reception from the University management was emotional. And later, the first hot shower after five days felt like a national award.



What the Mountain Taught Me

The mountain was more than a physical challenge. It was a mirror, a mentor, a ruthless performance review.

- *Pole pole* is not a slogan; it is strategy, survival, and wisdom.
- Your people determine your summit. The entire crew that participated in the Season 9 Expedition 19, this story would look very different.



- The mountain does not care about your grades, your ex, your past, your bank balance, or your social media metrics. Up there, it is just you, your legs, and the version of yourself you choose to become.
- I lost 2 kg and found an entirely new me.
- That crazy dream you have is valid; commit to it and watch it become a reality.

Gratitude

This journey was possible because of the unwavering support of Dedan Kimathi University of Technology. Programs like C2E do not just build hikers; they build resilience, leadership, discipline, and character. A heartfelt thank you to: Mr. Mwai, Ms. Mary, Mr. Ndegwa, and Mr. Miano for keeping us safe, encouraged, and grounded; the porters – the true superheroes of Mt. Kenya; Mr. Wachepele for planting the seed; and my friends for the jokes, snacks, slow pace at the back, and loud cheers at every milestone. You made the mountain lighter.

Looking Forward

Even now, I catch myself daydreaming about the crisp Shipton air, the streams in Mackinder's Valley, and the feeling of standing above the clouds. Mt. Kenya changed me. It expanded my definition of what is possible. Because if a former PE-skipper who once ate *omena* and ugali at Nyeri View can stand at 4,750 m feeling unstoppable…then trust me you, too, can redefine what's possible.

See you on the mountain, DeKUT.

MY IAESTE INTERNSHIP EXPERIENCE

By Rose Maina

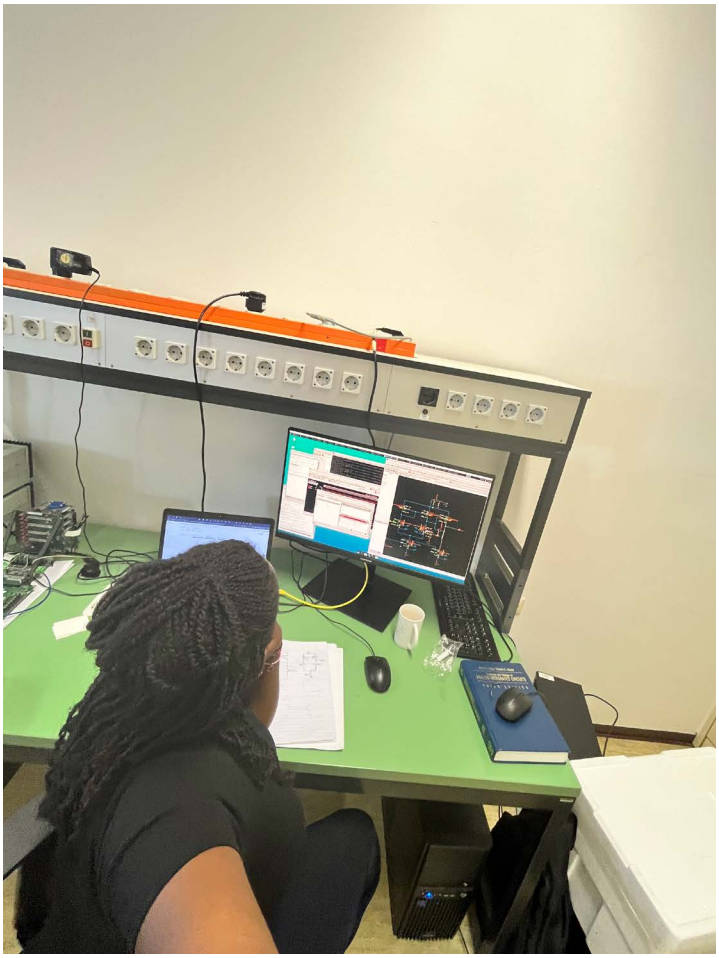


I recently completed my Bachelor of Science in Electrical and Electronics Engineering, and this year I had the incredible opportunity to undertake my first international internship at the Karlsruhe Institute of Technology (KIT) in Germany through the IAESTE program. What began as a technical internship quickly became a life-changing journey of growth, discovery, culture, and confidence.

At KIT, I worked in the ASIC Laboratory of the Karlsruhe School of Elementary and Astroparticle Physics, focusing on analog and mixed-signal integrated circuit design. My primary project involved the Low-Noise Amplifier (LNA) section of the USCT9C ASIC, a specialized microchip used in 3D Ultrasound Computer Tomography (USCT) for early breast tumor detection. The LNA is a sophisticated three-stage receiver designed to amplify extremely weak ultrasound echoes, sometimes as low as 1–100 µV, while maintaining excellent signal fidelity.

The Low-Noise Amplifier (LNA) I worked on uses a folded-cascode topology with a low-noise PMOS input device and a three-stage architecture. The first stage provides low- noise voltage amplification, while the second and third stages use CR-RC shaper circuits, resulting in a total gain between 40 and 720. Simulations showed up to 96 dB gain with only 4 µV input-referred noise, and a tunable bandwidth from 500 kHz to 6 MHz. The LNA also supports wide-band mode, amplifying signals up to 48 MHz, and narrow-band mode, reaching as high as 130 dB at the transducer's 2.5 MHz resonance frequency.

Part of my assignment was to analyze how this design would perform if redesigned in a 180 nm CMOS technology instead of the original 350 nm HV-CMOS process. I examined the potential benefits—such as higher bandwidth and smaller silicon area—as well as challenges





like flicker noise, lower voltage headroom, and the major limitation that standard 180 nm processes cannot handle the 120 V required by the transmitter stage. This experience strengthened my analytical skills and deepened my passion for microelectronics.

Beyond the engineering, this internship was also a cultural adventure. Living in Germany allowed me to immerse myself in the local culture, meet people from all over the world, and even learn how to speak German—a skill I am very proud of. Weekends became opportunities to explore the beauty of Europe. I visited France, enjoyed the rich culture and architecture, and took unforgettable trips to Switzerland, where the breathtaking landscapes felt like something out of a postcard.

As someone who has always dreamed of global exploration, strolling through the charming streets of Strasbourg, exploring Swiss cities, and navigating German towns with my growing German vocabulary felt surreal. It was the perfect blend of learning, fun, and adventure.

Before traveling abroad, I had already been involved with cultural exchange through the IAESTE Club at DeKUT, where I interacted with visiting international students through cookouts, wildlife excursions, community visits, and hikes. Being an exchange student brought those experiences full circle and gave me an even deeper appreciation for cultural diversity.

As IAESTE marks 76 years, I am proud to be one of the thousands of students its mission has touched—connecting young engineers to global research, new cultures, and life-shaping experiences. My journey has shown me that engineering is not just about circuits and equations; it is also about courage, curiosity, exploration, and the willingness to grow.

I am deeply grateful to DeKUT for creating opportunities that allow students to broaden their academic and cultural horizons. I am also grateful to the IAESTE community at KIT for their support, mentorship, and kindness throughout my stay.

If I were to summarize my experience in a single line, I would say: **IAESTE is the spark that ignites global curiosity—a flame that burns brighter with every student who dares to step into the world.**

THREE COUNTRIES, TWO CONTINENTS, ONE JOURNEY: HOW IAESTE REWROTE MY DEGREE

By Allan Mucheru, Mechatronics Department



When people ask about my time at university, I don't just talk about lectures or exams. I tell them about Karlsruhe, Dubai, and the Swiss Alps. Thanks to IAESTE, my engineering degree hasn't confined to one campus; it was a three-part global adventure that taught me more about applied science and cultural resilience than I could have ever imagined.

Chapter 1--Germany

My first international internship stop was at the prestigious Karlsruhe Institute of Technology (KIT). Technically, I was neck-deep in materials science, focusing on a new method for studying metal composites. I spent my days doing simulations, learning the true meaning of German Gründlichkeit (thoroughness.) But life wasn't all about Python. Karlsruhe sits right on the edge of the Black Forest. I reserved weekends for hikes, jumping on the DB train from city to city, met life-time friends from all across the world, and, yes, finally figured out the proper etiquette for ordering a koffee and a Bratwurst without looking like a total tourist. The biggest takeaway? Structure enables freedom.

Chapter 2--My Time in the Middle East

The shift to the University of Sharjah in the UAE was a total change of pace, and climate! But like they said, no risk no gain. Professionally, this was a high-octane experience. I worked with a once-in-a-lifetime Jordanian professor, focused on nuclear fuel cladding materials. This was cutting-edge, high-responsibility research, and it showed me that engineering ambition knows no geographic limits. Together, we co-authored a conference paper on our work.

Culturally, living in Sharjah was rich and eye-opening. As a first-timer in the UAE, I learned the immense value of patience and hospitality, navigating a society that beautifully blends deep traditions with futurism. Like you have probably guessed, I met great friends from across the world, most of whom we have kept close contact since. Away from the campus, I had so much fun in the sand dunes, and spent hours mesmerized by the quiet serenity of the desert.



Chapter 3--Switzerland

My final IAESTE leg took me to the breathtaking beauty of Switzerland, where my focus was on fiber optic sensing technology. This internship was a deep dive into hyper-specialized, state-of-the-art diagnostics. The level of analytical rigor required was intense. But the Swiss also taught me the art of the perfect work-life balance. After a demanding week of ultra-precision lab work, I would step out and instantly be surrounded by mountains. Switzerland re-ignited my love for cycling. It is a culture where the pursuit of perfection in one's work is matched only by the dedication to enjoying the stunning natural world. This trip cemented my belief that true career longevity requires respecting your own need for clarity and space—a lesson learned high above the valley floor.

Final Thoughts

These three countries didn't just give me three technical specialties; they gave me a global view of the professional world. My engineering degree is now backed by a global skillset and a collection of travel stories that I wouldn't trade for anything. My heartiest gratitude to IAESTE DeKUT, particularly to Dr. Ann Kirugumi, Ms. Jane Ngeso, Mr. William Kinyua, and the receiving committees in the three countries for their unmatched efforts in making my experiences possible.



INTERNATIONAL INTERNSHIP

By Alexandre Ruscher

Dear members of DeKUT,



My name is Alexandre Ruscher and I have been lucky to be part of the DeKUT community for 2 months. For September and October, I took part in an international internship in the field of food science. I am from France, where I completed a Bachelor of Geology at Sorbonne University, to follow with a Master of Biogeosciences at University of Neuchâtel in Switzerland. Working and learning in Kenya was an exceptional experience. The internship was well organized. I started at the University farm, where I learned about coffee farming, as well as horticulture and dairy activities. The farm is a peaceful place to work, but it was also the most demanding one.

I then went to the coffee laboratory, where I learned about coffee processing under the supervision of the excellent Mr Chuaga Kinuthia and the intern Lilian Kibura. The work there was full of passion, and I learned every day by meeting different farmers and experts. I also met many international visitors who came to visit the University coffee farm and laboratory.

Finally, I worked at the food workshop on coffee wine synthesis and yogurt production. I liked that everyone in this laboratory was willing to experiment and discover new techniques and flavors. I was supposed to work at the microbiology laboratory and the



food chemistry laboratory as well, but due to an ongoing strike at the University, I didn't work there, so my time at the coffee laboratory and the food workshop was extended.

I went to Kenya to discover the culture and to work in food science. Both of these were completely new to me. Now I know that I want to continue working in food science because what I discovered at DeKUT was so incredible that it made me want to pursue this field further. The culture and the people I encountered were the best part of my journey. Everyone in Kenya speaks at least three languages: English, Kiswahili, and their mother tongue, inherited from their tribe. This makes people both deeply connected and unique at the same time, which is truly fascinating. I enjoyed spending time at church and discovering different churches around the University.The picture added shows the group of students I went with to Mount Kenya for five days of camping coordinated by the great Mr. Mwai. This camping experience truly connected me with the Kenyan spirit of cohesion.

Finally, I actively joined an entrepreneurial project called **Tumakazi Jobtech**. It has been funded by Joshua Gichana and it aims to build trust between Kenyan freelancers and clients. The goal is to integrate in a single marketplace negotiation interfaces, secured payment system, upskilling center for freelancers and rating and work verification. Tumakazi Jobtech platform is directly connected to **Skill Kwa Ground**, to build knowledge, and **Tujengane Circles**, to build communities. None of the above would have been possible without a man that helped me since my arrival in Kenya and until my departure, John Kimani. Sincerely, I thank you again for everything you did for me.

Hope to come back soon at DeKUT, take care!

MY EUROPE EXPERIENCE

By Juanta Muriithi

'*The most difficult thing is the decision to act; the rest is merely tenacity.*' - Amelia Earhart

I stood on the rooftop of my apartment, gazing at the sky. Excitement and anxiety danced in my chest. All I could see were distant stars and the moon shining brighter than ever. I had no idea what awaited me on the other side of the world. With pure curiosity and wonder in my heart, I boarded my first flight. Eleven hours later, I was breathing in the crisp, fresh air of Zurich, Switzerland. Every building, every sprouting plant, seemed to invite me in. My eager curiosity was met with friendly faces, always ready to help. I'll admit it—70% of the time, I was lost. But never truly lost, just indirectly exploring.

The people walked fast, and every counter offered service so perfect it could have its own Yelp review. I observed everything with an open mind, and I learned quickly. Keepers of time who could plan weekends four months ahead? Yeah… I had never seen that before either. But apparently, that's Swiss life. They say, "*When in Rome, do as the Romans.*" Months later, I realized I had become one of them. The real magic happened at IPP, the Institute of Product Development and Production Technologies. Every day posed a new challenge, and there I was, sleeves rolled up, ready to tackle the machines I had only read about in class. Now I could use them independently, confidently. I sharpened my skills, and each day, I emerged a little better than the last.

Travel

You would probably guess that I spent my weekends and holidays to the fullest, and you'd be right. Germany saw me, France saw me, Italy saw me… and the list goes on. Thanks to Europe's incredibly convenient train system, you could hop from one country to the next in just a couple of hours, sometimes as little as one. It is no shock to see people work in one country and live in another. My people would say, "*Unaendea maziwa Tanzania, unarudi unapika chai Kenya.*" Honestly, this was exactly that.

Food

Of course, I immersed myself in Swiss cuisine. My favorite? Zürcher Geschnetzeltes—Zurich-style sliced meat. A warm, savory dish made with mushrooms, tender pork, and a creamy, thick sauce. I paired it with everything, just like avocados. It is now a staple in my family's menu. And the cheese—oh, the cheese! How does one even get enough when it is this good? I barely scratched the surface of the hundreds of types, yet each bite felt like a masterpiece. My favorite, however, still stands out: Raclette. And the bread… there are over 3,000 types of bread in Europe. Bread wasn't just for breakfast—it complemented every meal, from lunch to dinner. I could write a novel about the food alone, but none of this experience would have been possible without IAESTE Kenya and Switzerland. Thank you, IAESTE!



FROM CHALLENGE TO TRIUMPH: "A GEOLOGIST INSPIRING MENTAL HEALTH JOURNEY AT DeKUT

By Erastus

I joined Dedan Kimathi University of Technology in 2019 to pursue a Bachelor of Science in Geology, a rigorous program built on fieldwork, intensive coursework, and scientific precision. I dreamt of contributing to Kenya's geological and environmental sectors, and DeKUT's serene environment became the ground where those dreams began to take shape. Today, as I celebrate my graduation, I honour the long journey that brought me here.

My years at DeKUT were rich with learning, friendship, and personal growth. Every day offered something new, and I gradually learned to balance academics with social life. The friendships I formed became a second family, especially as I navigated life away from home. Living independently taught me responsibility; how to manage my time, prepare meals, and take care of myself. The library became one of my most important spaces, offering extensive geology references that supported my assignments and research. Outside class, I enjoyed DeKUT's beautiful surroundings; hiking and short trips with friends that helped me unwind and reconnect with nature. But campus life also had its difficult moments. Assignments sometimes piled up, and exam seasons brought inevitable stress. With support from friends and lecturers, and with better planning, I learned to cope and continue moving forward.

Academics and Mental Health Challenges

My academic journey began with strong KCPE results that earned me admission to Leshau Boys High School in Nyandarua County. In Form Three, however, I started experiencing psychological challenges. I completed high school and sat for my KCSE, but my grade fell short of university requirements. Determined to pursue geology, I returned to school at JM Kariuki Memorial Secondary for a second attempt. This time I attained a B– (54 points), with strong grades in Geography, Mathematics, and Physics—the foundation I needed to pursue my dream. However, beneath my enthusiasm lay a struggle that would follow me into university. Throughout my time at DeKUT, I quietly battled a mental health condition that often dimmed even my brightest days. While others saw a focused student chasing his goals, I was constantly balancing academic pressure with emotional turbulence. The demands of Geology—labs, field excursions, data-heavy assignments, and the high expectation for accuracy—sometimes overwhelmed me, especially when combined with my internal battles. Yet, a steady flame of determination kept me going.

Support, Healing and Academic Resilience

With the support of my family, the Student Counselling Department, the Director and my lecturers in the Department of Geology, as well as close friends, I slowly began to regain my footing. Counseling sessions provided a safe space to understand my condition, face my emotions, and adopt healthy coping strategies. My academic mentors offered guidance, encouragement, and flexibility when I needed to register a lighter unit load. Their belief in my potential reminded me that I was more than my struggles. Even on days when my mental state felt fragile, I kept going. I completed field

reports, undertook lab analyses, collaborated on projects, and rebuilt my confidence. By my third and fourth years, I had transformed not only as a student but as a person. I learned to approach challenges with clarity, maturity, and resilience. My final-year project became a symbol of how far I had come.

A Break, a Return and a Strong Finish

In 2022, my mental health reached a point where I needed to take leave from my studies. I stepped away to receive medical care. In 2023, stronger and supported, I returned to finish what I had started. I continued counseling, took my prescribed medication consistently, and learned to manage academic pressure more effectively. These efforts restored my self-esteem, courage, and resilience. I completed my remaining coursework successfully and now stand proudly among DeKUT graduates.

A Message of Hope

Today, I graduate with a Bachelor of Science in Geology. My journey shows that success is rarely linear. It belongs to those who rise, again and again, even when life demands more than they feel capable of giving. Looking ahead, I hope to contribute to Kenya's geological and environmental fields—whether in mineral exploration, environmental geoscience, geotechnical engineering, or natural resource management.

Beyond career goals, I want to use my story to advocate for mental health awareness, especially in STEM fields where struggles are often hidden.

To my classmates, I say: ***"You are stronger than the days that tried to break you. Ask for help. Keep going. Your story is still unfolding."*** To the Vice Chancellor and the entire DeKUT fraternity, thank you for your support, patience, and belief in my potential. To every student fighting silent battles, remember: **Your challenges do not diminish your brilliance. Your strength grows through what you overcome.**



UNIVERSITY CHAPLAINCY: FAITH BUILDING AND OUTREACH

By Rev. Fr. Dr. Vincent Wambugu, HoD-Chaplaincy

Dedan Kimathi University of Technology is founded on the principle that intellectual development cannot and should not be isolated from the whole person's development. The University envisions excellence in moral guidance as part of its mission. It, therefore, undertakes to produce morally upright leaders who contribute to attaining national goals. The Chaplaincy supports this mission by coordinating spiritual, pastoral, and moral guidance for the DeKUT community, especially students, through their immediate Faith Groups. The Head of Chaplaincy ensures that all Faith Communities have a suitable environment for their communal worship, as an expression of their faith. Currently, the University recognizes four Faith groups. These are:

- DeKUT Seventh Day Adventists (DeKUTSDA)
- DeKUT Catholic Students (DeKUTCS)
- DeKUT Christian Union (DeKUTCU)
- DeKUT Answar Muslims (AMDeKUT)

By executing its mandate, the Chaplaincy has provided a platform for faith groups to thrive and engage in outreach activities within and beyond the campus. Some notable activities undertaken by the faith groups are listed below.

DeKUT Christian Students (DeKUTCU)

DeKUT Christian Union undertook activities that also saw them welcoming other institutions for prayer and worship. They held a Worship Night in 2024, conducted a mission with the Gabbra Community in Marsabit, and held another Worship Night in 2025 that drew 1200 attendees from Kagumo TTC, Mathira TVC, PEFA Church, PCEA Kimathi, and Karatina University.



DeKUT Christian Union students during their Worship Night



DeKUTCU during a mission with the Gabbra Community in Marsabit

DeKUT Catholic Students (DeKUTCS)

DeKUT Catholic Students undertook spiritual activities, as well as other forms of outreach and cultural interactions. One cultural event attracted an international presence: the cultural event at Quovadis Youth Hub under the theme "*Beauty in Diversity*". They also conducted an environmental cleaning activity outside DeKUT Gate B towards Nyeri View, and a solemn pilgrimage to the Blessed Irene Stefani Shrine 'Nyaatha" Shrine in Mukurwe-ini.



Catholic students during a solemn pilgrimage to the Blessed Irene Stefani Shrine 1



DeKUT Catholic students during their cultural event at Quovadis Youth Hub with the theme Beauty in Diversity.

DeKUT Seventh Day Adventists Church (DeKUTSDA)

This Faith group brings together the adherents of the Seventh-day Adventist Church. Over time, they engaged in both faith and community-based initiatives. DeKUTSDA participated in the Mt. Kenya Central District universities colleges joint Sabbath at the Nyeri National Polytechnic. They also held a Music Sabbath to promote and deepen their spiritual nourishment through songs.



DeKUTSDA also held a Music Sabbath to promote and deepen their spiritual nourishment through songs.



DeKUTSDA during the Mt. Kenya Central District universities colleges joint Sabbath at the Nyeri National Polytechnic

DeKUT Answar Muslim (AMDeKUT)

The AMDeKUT brings together the Muslim students. They carried out activities within and beyond the University. Some of the activities included: mosque cleaning in Mweiga, Nyeri County, charity Visit at Thunguma Children's Home, and an exchange visit to Mt. Kenya University, Thika.



Answar

Reflection

"But how can they call on him in whom they have not believed? And how can they believe in him of whom they have not heard? And how can they hear without someone to preach? And how can people preach unless they are sent? As it is written, "How beautiful are the feet of those who bring [the] good news!"

(Rom. 10: 14-15)

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DRIVING CHANGE THROUGH CAPACITY BUILDING, COMMERCIALIZATION AND DIGITAL SERVICE DELIVERY

By Dr. Paul Tanui, Managing Director, DeKUTES

This year's theme, "*Driving Change Through Capacity Building, Commercialization and Digital Service Delivery*," highlights DeKUT Enterprises Company (DeKUTES) commitment to fostering transformation through capacity building, commercialization, and digital service delivery. The capacity-building programs are distinguished by an experiential learning model, incorporating team-building and outdoor challenge activities that develop essential competencies such as leadership, communication, teamwork, and problem-solving. These interventions help build character, resilience, and workplace readiness. The programs are further strengthened by DeKUT's extensive academic and technical expertise, with specialists from various Schools, Institutes, and Centers contributing knowledge in areas such as innovation, engineering, ICT, entrepreneurship, vocational training, leather technology, agriculture, sustainability, and value addition.

Strengthening Capacity Building Through Experiential Training

In 2025, DeKUTES expanded its training portfolio by incorporating structured team-building sessions into its customized capacity-building programs. Participants undertaking short courses participate in an afternoon at the DeKUT Challenge Course, a purpose-built facility designed to enhance teamwork, leadership, communication, and problem-solving competencies. Facilitators align activities with the specific objectives of each group, ensuring a practical and transformative learning experience. Upon completion, participants are awarded a University-issued certificate of participation, affirming the formal recognition and value of the training.



Driving Innovation Through Commercialization of University Technologies

Driving Innovation Through Commercialization of University Technologies

The commercialization of University innovations continues to be a central priority for DeKUTES. A key achievement is the deployment of biometric devices developed at the University, which are now operational across campus. This milestone enhances institutional efficiency while demonstrating DeKUTES' commitment to converting research outputs into market-ready solutions. The company is currently scaling production based on client demand, with orders conveniently placed through the website, email, or an in-person visit to the University.



Adding Value Through Practical Learning and Product Commercialization

Adding Value Through Practical Learning and Product Commercialization

The Company continues to commercialize a diverse range of products developed across various University Institutes and Departments. These include premium coffee and yoghurt processed at the IFBT Laboratory, detergents produced in the Chemistry Lab, apparel from the Fashion and Design Workshop, and innovative engineering devices and machinery from the engineering laboratories. By integrating product commercialization with academic programs, students gain valuable hands-on experience that aligns with their career paths, effectively bridging theoretical learning with real-world industry applications.



Digital Service Delivery Through the Enhanced DeKUTES Website

Digital Service Delivery Through the Enhanced DeKUTES Website

DeKUTES upgraded its website to offer a seamless and user-friendly experience for online product ordering, service reservations, training enrollment, and consultancy requests. The platform provides detailed information on consultancy and training programs, including customized courses in areas such as cybersecurity and artificial intelligence (AI). The enhancements aim to boost convenience, expand accessibility, and strengthen real-time engagement with clients across diverse sectors. Link to the website: https://dekutes.dkut.ac.ke/



Strengthening Capacity Building Through Experiential Training



Expanding Utilization of Conference and Event Facilities

Expanding Utilization of Conference and Event Facilities

The Company continues to enhance the utilization of its diverse conference and event facilities suitable for both large-scale and small gatherings. In 2025, the iconic Freedom Hall, with a capacity of up to 1,500 participants, hosted several high-profile events, including the launch of the Data Protection Commission's 2025–2029 Strategic Plan. Smaller venues such as Nelion, Batian, and the Conservancy halls remained ideal for workshops, trainings, and product unveilings. These facilities are offered as comprehensive packages that include venue setup, refreshments, meals, stationery, WiFi, and audiovisual support, ensuring clients enjoy a seamless and well-coordinated conferencing experience.

Other Activities

Beyond the products and services mentioned above, the Company, through the DeKUT Conservancy Department, has enhanced biodiversity by introducing giraffes, zebras, impalas, waterbucks, warthogs, and other wildlife species. The facility is easily accessible



Other Activities

to DeKUT students, staff, and external clients, either individually or as groups, at an affordable rate. For bookings and inquiries, including guided tours, camping or ground hire, nature trails, and hiking, please contact us directly. We welcome you to visit our Conservancy and enjoy the serene environment as you unwind and relax.

In conclusion, building strong customer relationships remains essential to our business growth and reflects our continuous commitment to customer satisfaction. We take great pride in upholding the highest standards of quality, health, and safety in all the products we provide to our students and staff. On behalf of the DeKUTES team, we sincerely congratulate the graduating Class of 2025. It has been our pleasure to serve you throughout your academic journey. Hongera!

Programmes offered at DeKUT

SCHOOL OF ENGINEERING

- PhD In Mechanical Engineering
- PhD In Civil and Environmental Engineering
- PhD In Electrical and Electronic Engineering
- MSc in Telecommunication Engineering
- MSc in Civil Engineering
- MSc in Advanced Manufacturing and Automation Engineering
- MSc in Electrical and Electronic Engineering
- MSc in Industrial Engineering and Management
- MSc in Machine Tools Design and Manufacturing
- MSc in Mechanical Engineering
- MSc in Biomedical Engineering
- Post Graduate Diploma in Technical and Vocational Education
- 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 Science in Telecommunication Information Engineering
- Bachelor of Education in Technology (Civil Engineering)
- Bachelor of Education in Technology (Electrical and Electronic Engineering)
- Bachelor of Education in Technology (Mechanical Engineering)
- Bachelor of Technology in Building Construction

SCHOOL OF BUSINESS MANAGEMENT AND ECONOMICS

- PhD In Business Administration & Management
- Post Graduate Diploma in Project Management
- Master of Business Administration
- Master in Innovation and Entrepreneurship
- Master of Science in Business Analytics
- Master in Supply Chain Management
- Master In Economics
- Master of Science in Project Management
- Bachelor of Purchasing and Supplies Management (BPSM)
- Bachelor of Commerce (BCOM)
- Bachelor of Business Administration (BBA)
- Diploma in Business Administration (DBA)
- Diploma of Purchasing and Supplies Management (DPSM)

SCHOOL OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

- PhD In Computer Science
- MSc in Computer Science
- MSc in Cyber Security
- MSc in Data Science
- Post Graduate Diploma in Animation and Visual Effects
- Bachelor of Science in Computer Science
- Bachelor of Business Information Technology (BBIT)
- Bachelor of Science in Information Technology (IT)
- Certificate in Fundamentals of ICT

SCHOOL OF NURSING

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

SCHOOL OF SCIENCE

- PhD In Chemistry
- MSc in Applied Statistics
- MSc in Leather Technology
- MSc In Chemistry
- MSc in Industrial Biochemistry
- Bachelor of Science in Industrial Chemistry
- Bachelor of Science in Leather Technology
- Bachelor of Science in Actuarial Science
- Bachelor of Science in Mathematics and Modeling Processes
- Bachelor of Science in Polymer Chemistry
- Diploma in Leather Technology

INSTITUTE OF TOURISM HOSPITALITY MANAGEMENT

- PhD in Sustainable Tourism and Hospitality management
- MSc in Sustainable Tourism and Hospitality Management
- Bachelor in Sustainable Tourism and Hospitality Management
- Diploma in Sustainable Tourism and Hospitality Management
- Certificate in Institutional Accommodation and Catering Operations
- Certificate In German Language
- Mountaineering and Outdoor Expeditions Guiding

INSTITUTE OF FOOD BIORESOURCE TECHNOLOGY

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

GEOTHERMAL ENERGY TRAINING AND RESEARCH INSTITUTE (GETRI)

- MSc in Geothermal Energy Technology
- Post Graduate Diploma in Geothermal Energy Technology
- Bachelor of Science in Geology

INSTITUTE OF GEOMATICS, GIS & REMOTE SENSING (IGGReS)

- PhD In Geomatics and Geospatial Information Science
- MSc in Geospatial Information Systems and Remote Sensing
- Bachelor of Science in Geomatics Engineering and Geospatial Information systems
- Bachelor of Science in Geospatial Information Science and Remote Sensing

INSTITUTE OF CRIMINOLOGY, FORENSICS AND SECURITY STUDIES (ICFoSS)

- MSc in Forensic and Security Management
- Bachelor of Science in Criminology and Security Management
- Diploma in Security Management

INSTITUTE OF TECHNICAL AND PROFESSIONAL STUDIES (ITPS)

- Diploma in Building Technology
- Diploma in Fashion Design & Interior Decoration
- Diploma in Electrical & Electronics Engineering (Power Option)
- Certificate in Building Technology
- Certificate in Fashion Design and Interior Decoration
- Certificate in Electrical and Electronics Engineering (Power Option).
- Certificate in Mastery in ArchiCAD

CERTIFICATIONS

- Siemens Certified Mechatronic Systems Assistants (Level 1-3)
- Cisco Certified Network Associate (CCNA 1-3)

DeKUT is ISO 9001:2015 Certified

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