



MAY 2016

HIT SIGNS AGREEMENT WITH US VARSITY



HIT Vice Chancellor Eng. Q.C. Kanhukamwe shaking hands with Mr Ronald Mason Jr, the President of University of the District of Columbia during the signing ceremony.

The Harare Institute of Technology has entered into a Memorandum of Agreement with the University of the District of Columbia (UDC) Centre for Entrepreneurship, Leadership and International Development (CELID), effective from 16 May 2016.

The Memorandum of Agreement will run for an initial two-year period and may be extended by an additional two-year period or any mutual agreed period.

This agreement is focused on enhancing the two institution's national and international reputation through institutional development by establishing cooperation in areas related to sustainable urban food management, renewable energy harvesting, water conservation, job creation through entrepreneurship and the development of management and leadership capacity to ensure continuous national development.

The purpose of this MoA is to develop academic and scientific relationships between the two institutions that include faculty exchange, design and implementation of training programmes, and promoting cooperative activities in areas of mutual interest.

The two parties are also in agreement to undertake and implement cooperation framework in the development of a Centre of Excellence in Southern Africa covering issues to do with information technology, computer systems, economics, food technology, management and finance.

Computer general applications, software engineering, database, computer networking and cyber security are some of the areas of interest to be pursued in Information Science and Technology.

The University of the District of Columbia (UDC) Centre for Entrepreneurship, Leadership and International Development (CELID) is also partnering the Harare Institute of Technology to deliver programmes such as the train the trainer, exchange programmes for students and faculties, academic visits and internships.

HIT students will also be allowed to enroll in a range of well defined information technology courses such as computer science general applications, software engineering, database

management, computer networking and cyber security to enable the Institute's School of Information Sciences and Technology to close existing gaps.

The University of District of Columbia's School of Business and Public Administration, School of Engineering and Applied Sciences, College of Agriculture, Urban Sustainability and Environmental Sciences shall widen cooperation in the areas of sustainable systems, health science, engineering and information technology.

The Centre for Entrepreneurship, Leadership and International Development (CELID) is a university-wide centre that harness the intellectual and technical capital across the various university schools to support programmes that aim to equip communities across the District of Columbia, Africa and the Caribbean with skills and technology to promote entrepreneurship, leadership and economic development through sustainable intervention activities to improve the health and economic well-being of these communities.

Its mission is to offer research-based academic and development programmes that improve the quality of life and economic opportunity for people and communities in the District of Columbia, Africa and the Caribbean.

In 1977, the District of Columbia Teachers College, the federal City College, and the Washington Technical Institute were consolidated to establish the University of District of Columbia (UDC). The University currently offers 75 undergraduate and academic degrees programmes in agriculture, urban sustainability and environmental sciences, arts and sciences, business and public administration, engineering and applied sciences, community and law. The University of District of Columbia is a pacesetter in urban education that offers affordable and effective undergraduate, graduate, professional, and workplace learning opportunities.

Over the past years, the Harare Institute of Technology has entered into various memoranda of understanding with institutions of great repute from India, Iran, Turkey, China, and South Korea among others. The agreements seek to further strengthen the HIT brand and consolidate the institutions' international standing and reputation within the global community of universities.

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INNOVATION

LEADERSHIP

INTEGRITY

COMMITMENT

PROFESSIONALISM

HIT SOFTWARE ENGINEERING STUDENT GETS GOOGLE RECOGNITION, ATTENDS GOOGLE I/O 2016 CONFERENCE IN SAN FRANCISCO



Kudzai Chasinda (right) sharing a moment with Mr Sundar Pichai, Google's Chief Executive Officer (middle) and another participant.

Kudzai Aggrey Chasinda a second year HIT student of the Software Engineering Department was in San Francisco, United States of America attending the Google I/O 2016 Conference hosted at the Shoreline Amphitheatre.

Kudzai was in San Francisco from May 16 for a week. He is part of the Google developer ecosystem and as recognition of his involvement in one of Google's various communities, he was invited to attend the Google Developer Community Summit in San Francisco on May 17 followed by Google's biggest developer conference: Google I/O 2016 from 18-20 May.

He was a guest of Google for the duration of his stay and the global giant was responsible for the costs related to this visit.

Kudzai Chasinda developed a music platform called Chase Music Player. The application is user friendly and can be used by all age groups and is uniquely crafted to enhance playlists.

Reflecting on his maiden US visit, Kudza said he was greatly inspired to learn the Tensor Flow Machine Learning API. "During the Google Developer Community Summit I discovered a few tools that I believe can simplify my work as a developer. We got introduced to Google's Powerful Open Source Machine Learning tool called Tensor Low and a window into the new Firebase.

Then, in the early hours of Wednesday 18 May, the Google I/O kicked off with the Chief executive Officer of Google Mr Sundar Pichai emphasizing on machine learning as he introduced the Google

Home and the new voice assistant Google Assistant which allows contextual search", said Kudzai.

"I learnt how to build applications rapidly using Firebase and Database as a service platform by Google as well as more about Android. I was also able to network with the global community of software developers. My favourite showcase by various Google departments was the Virtual Reality

Displays by Google Play Music and Doctors Without Borders. I also witnessed for the first time the infamous self-driving cars and cars that are controlled by Android operating Systems.

I also picked up a few skills in creating progressive Web Applications, which can be optimized to work in regions of, low bandwidth and developing a cardboard Virtual Reality during the Codelabs sessions, he said.

Looking into the future Kudzai said he is working towards creating and building a blog series to develop his community, widen the Google Developer Community at the Harare Institute of Technology as well as developing more applications working with other students and some other developers in Zimbabwe.

Since its foundation in 1998, Google has become one of the foremost Web search engines in the world. Through innovative advances in search technology, Google has been able to provide Web users who conduct Web searches with quick and pertinent information. Google delivers its services through its own public site, www.google.com, and by licensing its search services to portals and commercial Web sites using Google's Site Search and Google Web Search services. Google is currently making a major push to expand its customer base around the world. At the same time, Google has begun selling advertising for clients using its search technology and has launched a major effort to assert and build its presence in this area in the international arena.



HIT HOLDS ENGINEERING COMPETITION

Trevor Mandeya Scoops First Prize in HIT 2016 Pre-NESAC Finals



Trevor Mandeya, First Prize Winner of the HIT 2016 Pre-National Engineering Students Awards Competitions (NESAC) Oral Presentations.

Trevor Mandeya, a final year Industrial and Manufacturing Engineering student won the first prize in the HIT 2016 Pre-National Engineering Students Awards Competitions (NESAC) oral presentations while Webster Rukweza from the same department also came first in the poster presentations.

The HIT 2016 Pre-National Engineering Students Awards Competitions (NESAC) were held on campus on 13 May.

Trevor Mandeya beat five other contestants with his Capstone Design Project entitled – 'Design of an Intelligent Eye Fungal Keratitis Screening System.' This is a system design to screen for eye fungal Keratitis ocular infection in early, medium and late stages, whilst improving access to affordability and accurate ocular healthcare services. The project also assesses the current eye fungal keratitis screening method in use in the local ophthalmological industry

in a bid to solve the challenges of affordability, accessibility and accuracy of ocular healthcare services currently faced. Methods used include the generation of decision-making algorithms, electronic journals, experimental analysis and field surveys. The system is recommended for use in optical clinics and practicing ophthalmologists.

"I am quite overwhelmed by this achievement and I am going to continue working on developing the system to improve its accuracy so that it can have fully adoption in the optical health care industry for the benefit of our people", said Trevor Mandeya.

Webster Rukweza's poster presentation was entitled "Design of a 12000 BTU/hr Commercial Hybrid Vapour Absorption Refrigeration System Customised For Retail Industry in Sub-Saharan Africa." "I am proud to be a winner in these competitions and from here I am going to continue working on this project seeking venture capital for

the commercialization of my project design", he said.

Trevor Mandeya and Webster Rukweza are now set to contest at the 2016 NESAC Final set for August.

All the contestants who participated in the preliminary-finals were from the School of Engineering and Technology.

Ropafadzo Jamakanga from the Chemical and Process Systems Engineering came second in the oral presentations with her project on the Design of an Integrated Wastewater Management System, Harnessing Biogas while Kupakwashe Dambanemweya from the same department also came second in the chart presentations with his project entitled "Design of a Plant to produce 1000 Litres per day of Kerosene from waste polythene plastics".

The other contestants in the oral presentations were Kutendakwedu Chisango, Prince Kanengoni, Lenard Makukumidza and Kudakwashe Musonza. Tanaka Masocha, Comfort Mhlanga, Linnet Jumo, and Tashinga Chakaingesu also participated in the chart presentations.

In his opening remarks, Dean of the School of Engineering and Technology Mr. P. Muredzi said that the Harare Institute of Technology has won the last two NESAC Finals in 2014 and 2015 and he is very proud of this achievement by HIT students. "We have set very high standard such that we have to compete amongst ourselves every day. Our students presenting their projects today in these competitions are showing that there is no shortage of talent in the engineering sector. We must utilise and maximize this talent for our national industrialisation", he said.

Dean Muredzi paid specially tribute to the organisers of this event, the Zimbabwe Institution of Engineers (ZIE) and the Engineering Council of Zimbabwe (ECZ) for sponsoring these competitions while calling on employers to demonstrate that engineering can provide satisfying and rewarding careers.

Guest of Honour, Engineer M. Manuhwa of the Engineering Council of Zimbabwe (ECZ) applauded the participants for coming with innovative projects which seek to offer global solutions to the challenges we are facing. "I was very impressed by the quality of presentations by HIT students as their innovations are offering solutions to most of the globally problems. All the projects are seeking are in line with the Sustainable Development Goals (SDGs) which are affordable clean energies, clean water and sanitation, climate action and sustainable cities and communities just but to mention a few", he said.

Engineer Manuhwa called on the students to be brave and embrace global grand challenges and focus on exponential technologies like artificial intelligence and robotics, nanotechnology, networks and computer systems as well as cluster computing and big data. "The Engineering Council of Zimbabwe (ECZ) will be giving an innovation award at the 2016 NESAC Finals", concluded Eng. Manuhwa.

A panel of engineers from the Zimbabwe Institution of Engineers (ZIE), Engineering Council of Zimbabwe (ECZ) Confederation of Zimbabwe Industries (CZI), Scientific and Industrial Research and Development Centre as well as the Zimbabwe Manpower Development Fund (ZIMDEF) adjudicated the competitions.



Webster Rukweza - Poster Presentations First Prize Winner



Ropafadzo Jamakanga - Second Prize winner in Oral Presentations



Dean P. Muredzi - HIT School of Industrial Sciences and Technology

Engineer M. Manuhwa, Chairman of the Engineering Council of Zimbabwe (ECZ)



AIRFORCE OF ZIMBABWE COURTS HIT



Wing Commander C. Nevanji (seated right), Deputy Director of the Airforce of Zimbabwe Engineering Department

The Airforce of Zimbabwe is seeking collaboration with the Harare Institute of Technology in the areas of aircraft engineering and technology development.

Wing Commander C. Nevanji, Deputy Director of the Airforce of Zimbabwe Engineering Department said this while leading a delegation of over 20 officers, technicians, and engineers on a familiarisation visit of the Harare Institute of Technology.

He added that the visit was meant to explore possible areas of cooperation and to upscale the relationship between the two organisations. Areas of potential collaboration cited were in engineering and technology training and the two parties agreed to pursue discussions on customised training courses in military aviation, information security and information technology.

Wing Commander C. Nevanji further revealed that

the Airforce of Zimbabwe has established a Research and Development Unit and saw the potential for further engagement and cooperation in engineering and technology projects.

Following a presentation on the Institute's establishment, structural functions, mandate, and overall contribution to the nation by Acting Vice Chancellor Dr. T. Padenga, Institute Registrar - Mrs S. Samupindu, Dean in the School of Industrial Sciences and Technology - Mr P. Muredzi; the visiting delegation were shown some of the various Capstone Design Projects by HIT students and graduates during a tour of the campus' departments, laboratories, workshops and Centres of Excellence.

Acting Vice Chancellor, Dr T. Padenga said the Harare Institute of Technology's doors are open for collaboration with the Air Force of Zimbabwe on technology development, re-engineering, skills training projects that will enhance the industrialisation of Zimbabwe.



HOWARD HIGH SCHOOL CAREER'S DAY



Howard and other neighbouring high school students during the Career's Day held on 18 May 2016.



END OF SECOND SEMESTER EXAMS IN PICTURES



HIT students sitting for their End of Second Semester Examinations 2015 -2016 Academic Year which started from Monday 23 May ending on 8 June 2016. We wish all our students Good Luck!

