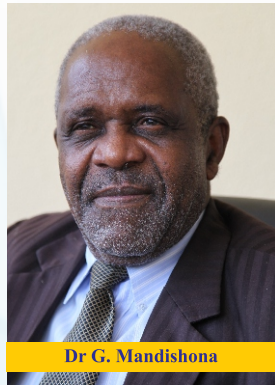


NEW BOARD TO STEER HIT



Dr G. Mandishona



Eng G. Magombo



Mr T.L. Mutasa



Dr A. Muvvika Mushavi



Mrs A. Machida



Ms W.L. Chirongoma



Eng. F. Nyandoro



Eng. F. Karonga



Mr M. Ndlovu



Dr L. Madzingaidzo



Mr S. Tayengwa



Dr P. Chiurunge



Mrs M.B. Maziva



Mr J. Urombo



Mr P.T. Kuipa



Eng C. Nyachowe



Dr D. Garwe



Eng. F. Mavhiya Bhiza



Mr P. Hita

The Harare Institute of Technology Vice Chancellor, Eng. Q.C. Kanhukamwe, Senior Management, Staff and Students congratulate the recently appointed Institute Board led by veteran Researcher and Scientist, Dr Gibson Mandishona.

Eng. G. Magombo is the Deputy Chair.

Apart from performing the normal Board functions, the Institute Board is expected to provide policy counsel and guidance as well as ensuring that HIT fully embraces and implements the University transformation agenda that promotes Zimbabwe's industrialisation and modernisation.

Contents

- New Board to steer HIT..... 1
- New Board Induction Programme and first Meeting..... 2
- HIT Sets up Modernisation and Transformation Committee..... 3
- Tel One MOU..... 4
- Jani Retires..... 4
- Christine Juta second Prize at NESAC Finals 2017..... 4
- Polymer Technology and Engineering Department Gets New Equipment..... 5
- New SRC Committee Elected..... 6
- NAM/NBA Industrial Biotechnology..... 7
- HIT at Zimbabwe International Book Fair... 7
- New Sports Courts..... 8
- HIT at Harare Agricultural Show 2017... 9

INNOVATION

LEADERSHIP

INTEGRITY

COMMITMENT

PROFESSIONALISM

BOARD INDUCTION PROGRAMME



HIT Board members during the induction programme on campus



NEW BOARD HOLDS FIRST MEETING



HIT SETS UP MODERNISATION AND TRANSFORMATION COMMITTEE



Eng. Q.C Kanhukamwe
HIT Vice Chancellor

The HIT Vice Chancellor, Eng. Q.C. Kanhukamwe has appointed an Industrialisation and Modernisation Taskforce to implement the Ministry of Higher and Tertiary Education, Science and Technology Development transformation - further deepening its Science, Engineering and Technology orientation. The Taskforce, will among others, oversee the incorporation of culture and heritage studies, as well as medicine programmes at HIT.

The move follows a policy pronouncement by the Ministry of Higher and Tertiary Education, Science and Technology Development for all state universities in the country to lead the industrialisation and modernisation agenda in Zimbabwe through relevant teaching, research, linkages with industry and enterprise development.

Under the new dispensation, Universities will be required to have four core faculties of Culture and Heritage, Medicine, Engineering and Technology, among others.

Speaking on the development, Eng. Kanhukamwe said the appointment of the Taskforce is being responsive to the new thrust as enshrined by our ministry. “As HIT, we fully embrace this new paradigm, and our focus will be on consolidating

gains in our traditional areas of Engineering and Technology; while focusing on the expansion of our programmes to include Culture and Heritage Studies, as well as Medicine,” he said.

Eng. Kanhukamwe also added that the entire Institute was geared towards this new dispensation; pressing on the need for all University structures to work more effectively towards the success of the new programme. “This will ensure that we maintain our lead in terms of teaching and research in Engineering and Technology. We cannot renege on this position,” he said.

The Committee will be chaired by the Pro Vice Chancellor, Dr Maxwell Chanakira and will include the University's Deans from the Schools of Engineering and Technology, Industrial Sciences and Technology, Information Science and Technology and Business and Management Sciences.

The Taskforce will be mandated to chart a transformational roadmap that resonates with the paradigm shift in the tertiary education sector. Its work, as directed by the Vice Chancellor will be guided by the following imperatives:

- (i) The need for the University to be research-intensive; and to concentrate on research which proffers technological solutions to challenges faced by society;

- (ii) Review of competences and skills of academic and administrative staff to ascertain available expertise and areas lacking
- (iii) Strong interaction and collaboration with industry, with a view to proffering solutions to the challenges they face;
- (iv) Collaboration with other Universities to solve local and global challenges;
- (v) Incubation of startups and creation of industries;
- (vi) Designing curriculum that is responsive to local, regional, continental and global challenges; among others.

Speaking on his appointment to chair the Taskforce, Pro Vice Chancellor, Dr Maxwell Chanakira also highlighted the unique advantage that HIT had over other Universities. “Our work is made easier given the already existing Science, Engineering and Technology mandate that the University has. Our major role will be to find new ways of strengthening our schools of Engineering and Technology,” he said. We have already rolled out a staff development programme for masters and doctoral studies so that our staff acquire high end skills needed to drive this agenda; while the University will also acquire the skills sets needed for this transformation. We already have a department of pharmaceutical technology, and we will soon be introducing a bachelor's degree in Radiology as well as a post graduate diploma in Radiology and Dosimetry.

Our approach is to build on these allied health programmes, until we reach our intended goal of establishing a faculty of medicine. We will also be exploring the establishment of Culture and Heritage studies which are important for national identity and national pride,” said Dr Chanakira.

“The key that will transform us are partnerships with industry. Companies are already coming forth and we see a lot of potential in that area. We will also need to improve our research focus and outputs; introduce graduate programmes and increase our enrolment,” he said.

Dr Chanakira also added that the new persuasion and inclination to a research-intensive University anchored on Science, Engineering and Technology was a natural evolutionary process that all universities must go through.

“The new dispensation by the Ministry is in fact following on a developmental trajectory that all universities must take as they evolve,” he said.

Dr Chanakira also added that the new policy will provide impetus for universities to begin to provide programmes, teaching and learning which is STEM-inclined, context-based; while providing solutions to the national challenges.

HIT ENTERS INTO MOU WITH TELONE



The Harare Institute of Technology has entered into a Memorandum of Understanding with telecommunications company, TelOne.

The MoU is centred on collaboration on information and communication technology (ICT) related innovation, research and commercialisation activities.

The purpose of the MOU is to establish a framework for innovative collaboration between TelOne and HIT through the following:

- The development and commercialisation of technology relevant to TelOne as an Information and Communication Technology operator;
- Furthering the provision of relevant real world industry experience for students;
- Build-up of integrated solution ecosystem which addresses business needs;
- Furthering the science involved in ICT telecommunications
- Furthering Corporate Social Responsibility through mentorship of next generation technopreneurs.

JANI RETIRES



Mr Jani

Lecturer in the Technopreneurship Education Centre, Mr Jani retired from the service of HIT on 31 July 2017.

Mr Jani joined the Institute on 1 January 2007 as a Lecturer. During his tenure, he also served as Acting Chairperson for the Technology Education Centre from January to March 2010.

The HIT community congratulates him on his retirement following a successful career in academia.

CHRISTINE JUTA SCOOPS NESAC FINALS SECOND PRIZE



Christine Juta with her NESAC Finals 2017 Second Awards.

Christine Juta scooped the second prize at the National Engineering Students Awards Competition (NESAC) 2017 Edition held at the Cresta Lodge in Harare on 4 August.

Christine Juta scooped the second prize at the National Engineering Students Awards Competition (NESAC) 2017 Edition held at the Cresta Lodge in Harare on 4 August. Tatenda Nyahwai of the University of Zimbabwe won the first prize for his presentation: Manufacture of graphite Crucibles Using Zimbabwean raw materials.

Christine Juta, a final year Electronic Engineering student won the first prize in the HIT 2017 Pre -NESAC Finals held on 14 June.

Her project is entitled – "Development of a

to complete the hill start, failed to successfully complete parallel parking or failed to correctly observe the traffic light. Any of which implies the motorist has failed the driving test. Should each stage be completed successfully, the motorist is permitted to proceed to the next stage.

These results will be transmitted serially, via USB to TTL cable. A C# application, developed using Visual Studio, provides the Graphic User Interface, which enables the VID official to observe the progress of the test in real time. The electronic circuits were designed with the computer aided design tools Proteus 8.5 and Kicad. The microcontroller software was written in C language using MikroC PIC development software.

POLYMER TECHNOLOGY & ENGINEERING GETS NEW EQUIPMENT



Some of the newly acquired laboratory equipment installed in the Polymer Technology and Engineering Department.

The Polymer Technology and Engineering department has acquired and installed the following laboratory equipment:

Melt Flow Indexer

This piece of equipment is used to measure the rheological (flow) behaviour of polymeric materials when pushed through a die orifice of a specified diameter at a controlled temperature and standard load.

Melt flow rate is an indirect measure of molecular weight, with high melt flow rate corresponding to low molecular weight. At the same time, melt flow rate is a measure of the ability of the material's melt to flow under pressure.

It assists in determining whether a particular grade of polymer is suitable for blow moulding or for injection moulding processes.

Tensometer

It is used to measure the mechanical properties of a polymer such as;

- Tensile strength
- Flexural strength/fatigue strength
- Compressive strength.

All polymeric fibres which work under tension or are exposed to pull forces (ropes) including those in the textile industry require the use of a tensometer to evaluate their

strength during drawing, weaving and applications.

Izod/Charpy Impact tester

This equipment is used in the determination of the impact resistance of materials and is calculated from the height the arm swings to after hitting the sample.

Impact tests are used in studying the toughness of materials.

A notched sample is generally used to determine impact energy and notch sensitivity.

Impact is a very important phenomenon in governing the life of a structure. For example, in the case of an aircraft, impact can take place by a bird hitting a plane while it is cruising, or during takeoff and landing the aircraft,

Plastics bottles dropping off moving trucks, water tanks dropping off stands, a car bumper hitting against a hard surface needs to be tough enough to absorb the impact without serious damage to itself. Bullet proof vest must have high impact strength for life saving.

Glass synthesis reactor

This is used to synthesise or produce synthetic and natural polymer resins from various sources including;

- Coal

- Methane gas
- Ethanol
- Biopolymers from natural products.
- Petrochemical reagents.

The reactor can be used for the value addition to our local raw materials for generation of feedstock to the plastics processing industry.

UV-vis Spectrophotometer

The equipment is used for the quantitative analysis of compounds in a sample using absorbance or reflectance of UV or visible light. The equipment is capable of determining the concentration of analyte in sample solution.

The following pieces of equipment useful in characterisation and testing of polymeric materials and products have also been ordered:

- Differential Scanning Calorimeter (DSC)- Moisture content and volatiles measurements
- Abrasion tester- measures material loss due to friction forces
- Shore Hardness tester- resistance to indentation of materials
- Dielectric strength tester- ability to measure the electrical resistance of polymers as insulators.

SRC ELECTIONS



Students voting for the new Student Representative Council for the 2017/18 Academic year.

The 2017 Student Representative Council (SRC) elections were held on Wednesday 30 August 2017 and a new committee was voted into Office for the period 2017/18.

The new SRC Committee is as follows:

- President:** Machuwaire Saviour
- Vice President:** Kurwaisimba Arifa
- Secretary General:** Chigumadzi Anesu
- Treasurer:** Dambamuromo Lisa
- Secretary-Legal Affairs:** Munyuki Roy
- Secretary-Welfare:** Maforo Mutsa Roy
- Secretary-Sport:** Mutsindiri Zvikomborero
- Secretary-Entertainment:** Chiduzza Andre
- Secretary-Academics:** Mandendera Archbell
- Secretary-Equity:** Tanga Neddy

CONGRATULATIONS!



Machuwaire Saviour
President



Kurwaisimba Arifa
Vice President



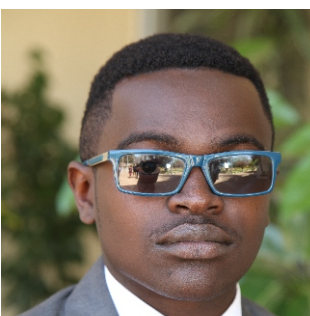
Chigumadzi Anesu
Secretary-General



Andre Chiduzza
Secretary: Entertainment



Roy Munyuki
Secretary: Legal Affairs



Mutsa Maforo
Secretary: Welfare



Neddy Tanga
Secretary: Equity



Lisa Dambamuromo
Treasurer



Zvikomborero Mutsindiri
Secretary: Sports



Archbell Mandendera
Secretary: Academics

NAM/NBA WORKSHOP ON INDUSTRIAL BIOTECHNOLOGY

2nd Training Workshop on INDUSTRIAL BIOTECHNOLOGY: DRIVING VALUE ADDITION AND BENEFICIATION

Harare, Zimbabwe
22 – 24 August 2017



Centre for Science and Technology
of the Non-Aligned and Other Developing Countries
(NAM S&T Centre)

Ministry of Higher and Tertiary Education,
Science and Technology Development, Zimbabwe

National Biotechnology Authority (NBA), Zimbabwe

An Industrial Biotechnology Training Workshop organised by the Non-Aligned Movement Centre for Science and Technology (NAM S&T), Ministry of Higher and Tertiary Education, Science and Technology Development, Zimbabwe and the National Biotechnology Authority of Zimbabwe (NBA) was held in Harare from 22 - 24 August running under the theme “Driving Value-Addition and Beneficiation”.

This Industrial Biotechnology Training Workshop was to understand how value addition

and beneficiation in the industry may be achieved through technology transfer and the application of biotechnology. It was also aimed to give local and international businesses an opportunity to showcase their products, to provide insight, education and awareness on technologies that may be exploited by producers for processing raw materials into bio-based products of economic importance as well as the promotion of beneficial collaboration among scientists, technologists and scientific organizations from Non-aligned and other developing countries. The other objective was to establish and link national and regional centres for development and transfer of technology.

Academics from HIT’s School of Industrial Sciences and Technology and the Biotechnology Department attended the workshop together with other stakeholders from 18 Non-Aligned Movement (NAM) countries in the industrial biotechnology sector including.

Dean P. Muredzi and Dr A. Phiri conducted a training lectures on Food, Biotechnology and Biochemicals as well as Bioenergy. Eng. M. Manyuchi presented on Integrated Biomass management with a goal to improve energy efficiency and soil nutrient recycling, while Mrs. T. Sengudzwa: also presented on achievements and prospects of industrial Biotechnology in

relation to Biomining and Bioenergy in Zimbabwe (Review). Dr A. Musengi, Acting Chairperson of the Biotechnology Department presented on the prospects for Biocatalysis in Zimbabwe, while Shumbeyi Muzondo presented on Status and Prospects of Industrial Biotechnology in Relation to Sustainable Production of Bovine Serum Albumin from Abattoir waste in Zimbabwe.

Participants challenged the industrial biotechnology sector to embrace safe, sustainable and responsible practices that are consistent with provisions of legal frameworks in the biotechnology industry.

NBA Zimbabwe Chief Executive Officer Dr Jonathan Mufandaedza called for the mainstreaming of biosafety in all sectors of the economy to enable the production of safe products under safe working environments. “Let’s mainstream biosafety in our operations, education system and research processes” he said

Zimbabwe is currently trying to up efforts to fulfil its economic strategy of value-addition and beneficiation on raw materials from mining and agriculture, through harnessing effective industrial biotechnological processes.

HIT AT ZIMBABWE INTERNATIONAL BOOK FAIR

The 2017 Edition of the Zimbabwe International Book Fair was held from 31 July – 5 August 2017 in Harare under the theme: “Making the Book Pay.”

HIT Institute Librarian, Mr Maenzanise who is the current Vice Chairman of the Zimbabwe International Book Fair Association Executive Board chaired the two day Indaba which took place from 31 July to 1 August. He also gave a insightful presentation on the Librarians workshop entitled Making the Book Pay, Realizing Local, Regional & Global Development Agendas. He highlighted that Libraries are key to achieving the SDGs and their roles are dynamic, encompassing provision of access to information, enabling people to make informed decisions as information improves people's lives, enabling the eradication of poverty and inequality, improving agriculture, providing quality education, supporting quality health, preservation and conserves a people's culture, central to research and innovation, critical to STEM.

“In the context of the UN 2030 Agenda, the International Federation of Library Associations and Institutions (IFLA) believes that increasing access to information and

knowledge across society, assisted by the availability of information and communications technologies (ICTs), supports sustainable development and improves people's lives,” said Mr Maenzanise.

Dean Muredzi made a presentation on Demystification of concepts in copyright limitations and exceptions in the digital era: Case of selected countries in Sub-Saharan Africa.

Mr M. Nhakura the HIT Acting Senior Assistant Librarian also presented an interesting, stimulating and thought provoking research which studies the role of parents and librarians in children's reading, education, talent identification and in stimulating life long career prospects. The purpose of the study was to establish a correlation between parent involvement and talent identification; nurturing and development of students towards the adoption of a possible life career through maintaining a reading culture supported by education systems. In his presentation, Mr Nhakura challenged the audience to identify the talents in their children which will automatically be developed to stimulate inventions from a tender age.



NEW SPORTS COURT



Construction workers putting the final touches to new basketball court recently constructed on campus.

HIT @HARARE AGRICULTURAL SHOW IN PICTURES

