



MAKERERE
UNIVERSITY

College of
Engineering, Design,
Art and Technology
(CEDAT)

CEDAT

Annual Report 2025



COLLEGE INFORMATION AND STRUCTURE

INTRODUCTION

The College of Engineering, Design, Art and Technology (CEDAT) is one of Makerere University's ten constituent colleges, with a student population of over 2,000 and 153 staff members across three schools and nine departments: the School of Engineering, the School of the Built Environment, and the Margaret Trowel School of Industrial and Fine Art. The College is recognized for its innovative teaching, impactful research, and service, supported by state-of-the-art facilities that attract faculty and students globally. It admits some of Uganda's most outstanding science students and is staffed by professors, researchers, and industry professionals of international standing. This report highlights CEDAT's performance in 2025, in teaching and learning, research and innovation, and community engagement.

CEDAT Mandate

The mandate of the College falls within the overall mandate of Makerere University namely;

a

Provision of higher education through teaching and learning, research, and knowledge transfer partnerships in Engineering, Design, Art and Technology

b

Dissemination of knowledge and allowing all persons to acquire higher education regardless of sex, race, color, or disability.

c

Provision of accessible physical facilities to the users of the Public University

Mission Statement

To provide transformative innovative teaching, learning, research, and outreach services responsive to dynamic national, regional, and global needs in Engineering, Design, Art, and Technology.

Strategic Objectives

The college sets out to achieve several strategic objectives listed below.

One

Integration of Gender and ICT

The College seeks to embed gender responsiveness and ICT innovation across teaching and learning. This ensures equitable access to digital tools and inclusive participation in all academic disciplines.

Two

Ethics and Entrepreneurship in Programs

Ethical reasoning and entrepreneurial thinking are integrated into every program. Students are equipped to act responsibly while driving innovation and job creation.

Three

Collaboration with Stakeholder Institutions

The College promotes strong partnerships with industry and stakeholder institutions in designing academic programs. These collaborations align curricula with real-world needs and emerging trends. They enhance graduate employability and institutional relevance.

Four

Promotion of Indigenous and Emerging Technologies

CEDAT values both indigenous knowledge and modern technological advances. It encourages the application of conventional and emerging technologies to solve local challenges.

Five

Visibility and Coordination of Research

The College is committed to increasing the visibility of its research centers and strengthening coordination systems. By promoting interdisciplinary collaboration and effective dissemination, CEDAT positions itself as a hub of innovation.

Six

Knowledge Transfer and Community Engagement

The College strives to expand its presence in knowledge transfer partnerships and community initiatives. Through outreach and applied research, it contributes to national development.

Seven

Industrial Training and Internship Strengthening

CEDAT emphasizes practical exposure through robust industrial training and internship attachments. Students gain hands-on experience that complements classroom learning. This linkage between academia and industry fosters professional readiness.

Eight

Staff Performance Management Improvement

A refined staff performance management system is being developed to foster accountability and excellence. Continuous evaluation and professional growth are prioritized. This ensures a motivated workforce aligned with the College's strategic vision.

Core values

The College is guided by the core values as stated in the University strategic plan namely;

Professionalism

Inclusivity

Integrity

Respect

Accountability



ACRONYMS

CEDAT	College of Engineering, Design, Art, and Technology
CFIIT	China Funds-in-Trust
CREEK	Centre for Research in Energy and Energy Conservation
DCEE	Department of Civil and Environmental Engineering
DCEM	Department of Construction Economics and Management
DFA	Department of Fine Art
DGLM	Department of Geomatics and Land Management
DIAAD	Department of Industrial Art and Applied Design
DME	Department of Mechanical Engineering
DVCM	Department of Visual Communication, Design, and Multimedia
GIS	Geographical Information Systems
IHCR	Institute of Heritage Conservation and Restoration
IUCEA	Inter-University Council for East Africa
MAPRONANO	Materials, Product Development, and Nanotechnology
MTSIFA	Margaret School of Industrial and Fine Art
MURCURGI	Makerere University Regional Centre for Urban Research, Governance & Innovation
PI	Principal Investigator
RCMRD	Regional Centre for Mapping Resources for Development
UECTL	Uganda Electricity Transmission Company
UIRI	Uganda Industrial Research Institute



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CEDAT LEA



Principal
**Prof. Moses
Musinguzi**

Dean

MARGARET TROWELL
SCHOOL OF INDUSTRIAL
AND FINE ART (MTSIFA)

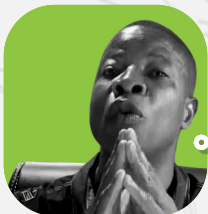
**Assoc. Prof.
Amanda
Tumusiime,
PhD.**



Dean

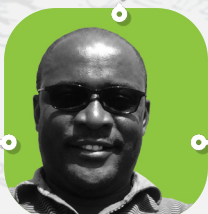
SCHOOL OF THE BUILT
ENVIRONMENT (SOBE)

**Assoc. Prof.
Anthony Gidudu,
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Head of Dept.

DEPARTMENT OF
INDUSTRIAL ARTS AND
APPLIED DESIGN (DIAAD)
**Dr. Robert
Sewanyana,
PhD**



Head of Dept.

DEPARTMENT OF VISUAL
COMMUNICATION DESIGN
AND MULTIMEDIA (DVCDM)
**Mr. Joseph
Sematimba**



Head of Dept.

DEPARTMENT OF FINE
ART (DFA)
**Dr. Rita
Nabuyungo
Edopu, PhD**



Head of Dept.

DEPARTMENT OF
URBAN AND REGIONAL
PLANNING
**Dr. Amin Tamale
Kiggundu, PhD**



Head of Dept.

DEPARTMENT OF
CONSTRUCTION
ECONOMICS AND
MANAGEMENT
**Dr. Nathan
Kibwami, PhD**



Head of Dept.

DEPARTMENT OF
GEOMATICS AND
LAND MANAGEMENT
**Dr. Lydia Kayondo
Ndandiko Mazzi,
PhD**



Principal
Communication
Officer

Ms. Harriet Musinguzi



College Registrar
Ms. Carol Nannono



IT Officer
Mr. Alex Isemaghendera



College Bursar
Mr. Ssambwa Ronald

ADMINISTRATIVE

LEADERSHIP

Deputy Principal
**Assoc. Prof. Kizito
Maria Kasule**



Dean
SCHOOL OF
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Dorothy Okello, PhD**



Head of Dept.
DEPARTMENT OF
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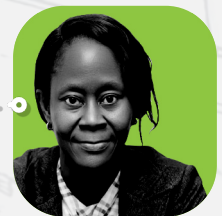
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**Dr. Abubaker
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Head of Dept.
DEPARTMENT OF CIVIL
AND ENVIRONMENTAL
ENGINEERING
**Assoc. Prof.
Robinah Kulabako,
PhD**

ADMINISTRATIVE STAFF



Procurement Officer
Ms. Shivon Atwine



Human Resource Officer
Mr. Richard Mugisha



Administrator
Ms. Ruth Kanyunyuzi

MESSAGE FROM THE PRINCIPAL

It is my honor to present the College of Engineering, Design, Art and Technology (CEDAT) Annual Report for 2025. This report reflects the dedication and resilience of our faculty, staff, and students in advancing transformative teaching, impactful research, and meaningful community engagement. For this invaluable contribution, which continues to enable us to realize our objectives, I extend my heartfelt gratitude to all our stakeholders and staff.

CEDAT, fondly referred to as “A Home of Innovation”, continues to uphold its mandate of providing higher education through pioneering programs in engineering, design, art, and technology. With over 2,724 students and 245 staff members across three schools and eleven departments, the college remains a hub of creativity, innovation, and excellence. Guided by our mission to deliver teaching, research, and outreach responsive to national, regional, and global needs, we have achieved remarkable milestones.

In 2025, CEDAT reaffirmed its role as a center of excellence, producing graduates of distinction, pioneering research, and engaging communities in transformative ways. Our faculty and students have continued to push boundaries through initiatives that enhance employability, research in sustainable energy, creative excellence in fine art and design, and innovations in urban planning and technology. With strong partnerships and modern facilities, CEDAT remains committed to shaping Uganda’s future and contributing to global scholarship.

Research and innovation remain central to our identity. Faculty and students contributed to groundbreaking projects addressing energy, urban development, climate change, and sustainable technologies. With more than 60 peer-reviewed publications in leading journals, CEDAT has strengthened its visibility in global scholarship. Partnerships with institutions such as UN-Habitat, the Volkswagen Foundation, and UNESCO have expanded our research capacity and impact. We were privileged to host the Ministry of Defense and Veteran Affairs (MODVA) with whom we had a stakeholder consultation to input in their effort of coming up with Uganda's Defense Research and Development Policy.

We also invested in infrastructure and facilities, ensuring that our laboratories, studios, and learning spaces provide an enabling environment for practical training and innovation. These developments reinforce our commitment to producing graduates who are not only skilled but also equipped to tackle real-world challenges.

In line with the trend prescribed in the Makerere University Strategic plan, Graduate education continues to grow steadily, with increased enrollment and completion rates across all programs. This progress reflects the College's dedication to advancing postgraduate research and nurturing the next generation of scholars and innovators.

As we look ahead, we embrace our identity, where accountability, professionalism, inclusivity, integrity, and respect guide our mission. I extend my gratitude to the Government of Uganda, Makerere University Management, our staff, students, and partners for their invaluable support in 2025. Together, we will continue to build a college that transforms ideas into impact.



Principal
COLLEGE OF ENGINEERING,
DESIGN, ART & TECHNOLOGY
Prof. Moses Musinguzi

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TEACHING AND LEARNING

Teaching and learning at the College of Engineering, Design, Art, and Technology (CEDAT) are delivered through nationally and internationally relevant programs across its three schools. The College provides a dynamic academic environment supported by modern laboratories and studios, which are central to practical training, research, and innovation. This strong foundation enables CEDAT to fulfill its mandate of producing highly skilled graduates while advancing knowledge and solutions for sustainable development.

1.1 Programs offered at CEDAT

In fulfilling its mandate, the College continues to expand academic opportunities by offering programs that address emerging national and global needs. These include specialized undergraduate and postgraduate courses designed to equip students with practical skills, research capacity, and innovative thinking. Below are the programs offered at both undergraduate and graduate level.

1.2 Schools & Departments

The College has over time grown in terms of the number of students to the current **2724 students** and **245 members of staff** spread across **3 schools** and **11 departments**.

1.3 School of Engineering

The School of Engineering comprises four departments, namely Mechanical Engineering, Civil and Environmental Engineering, Electrical and Electronics, and the Department of Computer and Communications Engineering

Table 1. List of Programs offered in the School of Engineering

The School of Engineering offers programs that equip students with technical skills and innovation for modern engineering practice. Table 1 lists the programs offered in the School.

Bachelor of Science in Civil Engineering	4 years
Bachelor of Science in Electrical Engineering	4 years
Bachelor of Science in Mechanical Engineering	4 years
Bachelor of Science in Computer and Communications Engineering	4 years
MSc. in Computer and Communications Engineering	4 years
MSc. in Sanitation	2 years
PGD in Sanitation	1 year

1.4 School of the Built Environment

The School of the Built Environment is made up of four departments, namely Architecture, Urban and Regional Planning, Geomatics and Land Management, as well as Construction Economics and Management

Table 2. List of Programs offered in the School of the Built Environment

The School of the Built Environment offers programs that train professionals in architecture, construction, and urban planning. Table 2 presents the programs available in the School.

Bachelor of Science in Valuation	4 years
Bachelor of Science in Land Surveying and Geomatics	4 years
Bachelor of Science in Quantity Surveying	4 years
Bachelor of Architecture	5 years
Bachelor of Urban and Regional Planning	3 years

1.5 The Margaret Trowel School of Industrial and Fine Art.

The Margaret Trowel School of Industrial and Fine Art (MTSIFA) is comprised of three Departments that include Visual Communications and Multi-media, Industrial Art and Applied Design, and the Department of Fine Art.

Table 3. List of Programs in MTSIFA

The Margaret Trowel School of Industrial and Fine Art (MTSIFA) offers programs that

foster creativity and practical design skills across visual communication, fine art, and industrial design. Table 3 lists the programs offered in the School.

Bachelor of Visual Communication, Design and Multimedia	3 years
Bachelor of Fine Art	3 years
Bachelor of Industrial and Applied Design	3 years

Table 4. List of Post-Graduate programs

The College of Engineering, Design, Art and Technology (CEDAT) offers postgraduate programs that advance research, innovation, and professional expertise. Table 4 lists the postgraduate programs offered at the College.

PROGRAM	DURATION
MSc. Architecture	2 years
MSc. Urban Planning and Design	2 years
Post Graduate Diploma in Urban and Regional Planning and Design	1 year
MSc. Construction Management	2 years
Post Graduate Diploma in Construction and Project Management	1 year
MSc. Geo-Information Science and Technology and Technology	2 years
MSc. in Land Management	2 years
MSc. Civil Engineering	2 years
MSc. Power Systems Engineering	2 years
MSc. Telecommunications Engineering	2 years
MSc. Renewable Energy	2 years
MSc. Mechanical Engineering	2 years
MSc. Technological Innovation and Industrial Development	2 years
Master of Arts in Fine Art	2 years

Table 5. ENROLLED & REGISTERED STUDENTS 2025/2026 SEMESTER I

The table below shows the number of registered and enrolled students in various programs at the College, information generated on April 9th, 2026 by the office of the College Registrar.

PROGRAMME		TOTAL	Male	Female	TOTAL	Male	Female
		ENROLLED			REGISTERED		
BACHELOR OF INDUSTRIAL AND FINE ARTS	YEAR 3	7	5	2	7	5	2
BACHELOR OF FINE ART	YEAR 1	61	30	31	51	25	26
	YEAR 2	36	21	15	35	21	14
	YEAR 3	54	31	23	53	30	23
BACHELOR OF INDUSTRIAL AND APPLIED DESIGN	YEAR 1	74	32	42	68	26	42
	YEAR 2	46	21	25	46	21	25
	YEAR 3	41	17	24	39	16	23
BACHELOR OF VISUAL COMMUNICATION, DESIGN AND MULTIMEDIA	YEAR 1	83	43	40	74	35	39
	YEAR 2	50	31	19	50	31	19
	YEAR 3	65	29	36	64	28	36
BACHELOR OF ARCHITECTURE	YEAR 1	34	23	11	34	23	11
	YEAR 2	26	15	11	25	14	11
	YEAR 3	24	13	11	24	13	11
	YEAR 4	22	13	9	22	13	9
	YEAR 5	45	29	16	45	29	16

PROGRAMME		TOTAL	Male	Female	TOTAL	Male	Female
		ENROLLED			REGISTERED		
BACHELOR OF URBAN AND REGIONAL PLANNING	YEAR 1	28	13	15	24	11	13
	YEAR 2	29	19	10	29	19	10
	YEAR 3	34	14	20	33	14	19
	YEAR 4	7	4	3	7	4	3
POSTGRADUATE DIPLOMA IN URBAN AND REGIONAL PLANNING	YEAR 1	4	1	3	4	1	3
BACHELOR OF SCIENCE IN LAND ECONOMICS	YEAR 3	40	16	24	40	16	24
	YEAR 4	27	20	7	27	20	7
BACHELOR OF SCIENCE IN VALUATION	YEAR 1	48	26	22	43	23	20
	YEAR 2	41	26	15	41	26	15
BACHELOR OF SCIENCE IN QUANTITY SURVEYING	YEAR 1	59	32	27	55	29	26
	YEAR 2	42	19	23	42	19	23
	YEAR 3	47	16	31	47	16	31
	YEAR 4	37	25	12	36	24	12
POSTGRADUATE DIPLOMA IN CONSTRUCTION AND PROJECT MANAGEMENT	YEAR 1	40	37	3	26	24	2
BACHELOR OF SCIENCE IN LAND SURVEYING AND GEOMATICS	YEAR 1	47	25	22	44	23	21
	YEAR 2	33	19	14	33	19	14
	YEAR 3	46	32	14	45	31	14
	YEAR 4	34	26	8	33	25	8
DOCTOR OF PHILOSOPHY (SCHOOL OF BUILT ENVIRONMENT)	YEAR 1	1	1	0	0	0	0
	YEAR 3	3	1	2	2	1	1
	YEAR 4	1	1	0	1	1	0

PROGRAMME		TOTAL	Male	Female	TOTAL	Male	Female
		ENROLLED			REGISTERED		
DOCTOR OF PHILOSOPHY (SCHOOL OF ENGINEERING)	YEAR 1	2	2	0	1	1	0
	YEAR 2	5	3	2	3	1	2
	YEAR 3	1	1	0	0	0	0
	YEAR 4	6	3	3	3	3	0
DOCTOR OF PHILOSOPHY (MTSIFA)	YEAR 1	3	2	1	0	0	0
	YEAR 2	2	1	1	1	1	0
MASTER OF SCIENCE IN LAND MANAGEMENT	YEAR 1	44	24	20	37	18	19
	YEAR 2	39	27	12	35	24	11
MASTER OF ARCHITECTURE	YEAR 1	3	3	0	3	3	0
	YEAR 2	7	4	3	5	2	3
MASTER OF SCIENCE IN URBAN PLANNING AND DESIGN	YEAR 1	24	14	10	18	10	8
	YEAR 2	13	10	3	8	6	2
MASTER OF SCIENCE IN CONSTRUCTION MANAGEMENT	YEAR 1	34	23	11	28	20	8
	YEAR 2	48	40	8	45	37	8
MASTER OF SCIENCE IN GEO- INFORMATION SCIENCE AND TECHNOLOGY	YEAR 1	39	25	14	33	20	13
	YEAR 2	41	30	11	34	25	9
BACHELOR OF SCIENCE IN CIVIL ENGINEERING	YEAR 1	124	87	37	117	81	36
	YEAR 2	113	88	25	112	88	24
	YEAR 3	88	65	23	88	65	23
	YEAR 4	78	61	17	75	58	17
MASTER OF SCIENCE IN CIVIL ENGINEERING	YEAR 1	65	51	14	47	35	12
	YEAR 2	37	32	5	22	21	1

PROGRAMME		TOTAL	Male	Female	TOTAL	Male	Female
		ENROLLED			REGISTERED		
MASTER OF SCIENCE IN SANITATION	YEAR 1	4	3	1	3	3	0
MASTER OF SCIENCE IN SANITATION	YEAR 1	4	3	1	3	3	0
BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING	YEAR 1	99	66	33	93	61	32
	YEAR 2	85	54	31	84	54	30
	YEAR 3	90	62	28	88	60	28
	YEAR 4	72	54	18	68	50	18
BACHELOR OF SCIENCE IN COMPUTER ENGINEERING	YEAR 4	7	6	1	7	6	1
BACHELOR OF SCIENCE IN TELECOMMUNICATION ENGINEERING	YEAR 4	6	5	1	5	4	1
MASTER OF SCIENCE IN POWER SYSTEMS	YEAR 1	57	46	11	42	35	7
	YEAR 2	31	25	6	16	13	3
MASTER OF SCIENCE IN RENEWABLE ENERGY	YEAR 1	41	33	8	26	20	6
	YEAR 2	20	13	7	12	8	4
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING	YEAR 1	87	57	30	77	51	26
	YEAR 2	65	44	21	64	43	21
	YEAR 3	62	41	21	61	40	21
	YEAR 4	59	47	12	58	46	12
MASTER OF SCIENCE IN MECHANICAL ENGINEERING	YEAR 1	40	36	4	28	26	2
	YEAR 2	19	17	2	12	11	1
MASTER OF SCIENCE IN TECHNOLOGY INNOVATION AND INDUSTRIAL DEVELOPMENT	YEAR 1	24	16	8	18	11	7
	YEAR 2	14	12	2	4	4	0

PROGRAMME		TOTAL	Male	Female	TOTAL	Male	Female
		ENROLLED			REGISTERED		
BACHELOR OF SCIENCE IN COMPUTER AND COMMUNICATIONS ENGINEERING	YEAR 1	115	67	48	92	52	40
MASTER OF SCIENCE IN COMPUTER AND COMMUNICATIONS ENGINEERING	YEAR 1	15	13	2	12	10	2
MASTER OF ARTS IN FINE ART	YEAR 2	2	2	0	0	0	0
M.A. IN FINE ART (FINE ART)	YEAR 1	9	5	4	7	4	3
	YEAR 2	5	4	1	5	4	1
M.A. IN FINE ART (INDUSTRIAL AND APPLIED DESIGN)	YEAR 1	5	2	3	5	2	3
	YEAR 2	1	0	1	1	0	1
M.A. IN FINE ART (VISUAL COMMUNICATION AND MULTIMEDIA DESIGN)	YEAR 2	5	4	1	5	4	1
MASTER OF SCIENCE IN TELECOMMUNICATION ENGINEERING	YEAR 2	1	1	0	0	0	0
TOTAL		3,174	2,058	1,116	2,859	1,818	1,041

TEACHING AND LEARNING



03

TEACHING AND LEARNING ACHIEVEMENTS

3.0 The 75h Graduation Statistics

The 75th Graduation Ceremony held on 31st January 2025 was a landmark occasion for CEDAT. It showcased the academic excellence of our students across all levels of study. The following statistics highlight the distribution of graduates by program and gender.

Table 6. CEDAT's 75th Graduation statistics

No	Program	Female	Male	Total
	PhD	1	3	4
	Masters	31	100	131
	Post Graduate Diploma	5	21	26
	Bachelors	228	377	605

3.1 Bachelors Students who got First-Class Degrees

The table below highlights the outstanding academic achievements of graduands who attained first Class degrees during the reporting year. This distinction represents the highest level of scholarly excellence, reflecting not only individual dedication and perseverance but also the institution's commitment to fostering academic rigor and intellectual growth.

Table 7. Students with First-Class Degrees

CEDAT continues to recognize academic excellence by celebrating students who graduate with First Class honors. Table 7 presents the list of graduates who attained First Class degrees across the different schools.

REG. NUMBER STUDENT NAME	SEX	CGPA	DEGREE CLASS	PROGRAMME
20/U/1300 Ssengendo Michael	M	4.81	First Class Honours	Bachelor of Science in Electrical Engineering
21/U/18777/PS Namirimo Roselock	F	4.66	First Class Honours	Bachelor of Industrial And Fine Arts
21/U/0474 Ssekidde Musa	M	4.64	First Class Honours	Bachelor of Industrial And Fine Arts

REG. NUMBER STUDENT NAME	SEX	CGPA	DEGREE CLASS	PROGRAMME
20/U/1304 Magambo Moris	M	4.64	First Class Honours	Bachelor of Science in Electrical Engineering
20/U/0773 Atujuna Gilbert Gonzaga	M	4.64	First Class Honours	Bachelor of Science in Mechanical Engineering
20/U/0085 Kanyesigye Samuel	M	4.61	First Class Honours	Bachelor of Science in Computer Engineering
19/U/0160 Mahad Uzairu Magala	M	4.61	First Class Honours	Bachelor of Science in Civil Engineering
21/U/0912 Nyende Alex	M	4.60	First Class Honours	Bachelor of Industrial And Fine Arts
20/U/0764 Massooto Maurice	M	4.60	First Class Honours	Bachelor of Science in Mechanical Engineering
20/U/0579 Rwothomio Malcolm Spencer	M	4.59	First Class Honours	Bachelor of Science in Quantity Surveying
21/U/18729/PS Aanyu Mary Goretti	F	4.57	First Class Honours	Bachelor of Industrial and Fine Arts
20/U/0624 Nyangoma Emmaheart	F	4.57	First Class Honours	Bachelor of Science in Land Economics
20/U/1296 Ssemaganda Remon	M	4.57	First Class Honours	Bachelor of Science in Electrical Engineering
20/U/0079 Mugizi Bruce	M	4.57	First Class Honours	Bachelor of Science in Computer Engineering
21/U/14341/PS Kigozi Keneth	M	4.55	First Class Honours	Bachelor of Industrial and Fine Arts
19/U/0476 Muhairwe Comrade Rodgers	M	4.54	First Class Honours	Bachelor of Science in Electrical Engineering
20/U/0772 M Mahad Nsereko	M	4.54	First Class Honours	Bachelor of Science in Mechanical Engineering

REG. NUMBER STUDENT NAME	SEX	CGPA	DEGREE CLASS	PROGRAMME
20/U/0781 Twongirwe Collins	M	4.52	First Class Honours	Bachelor of Science in Mechanical Engineering
20/U/1154 Yiga Rhyon Richard	M	4.51	First Class Honours	Bachelor of Science in Land Surveying & Geomatics
20/U/0118 Nansubuga Margaret Tendo	F	4.51	First Class Honours	Bachelor of Science in Civil Engineering
20/U/0585 Ntale Jordan Trevor	M	4.50	First Class Honours	Bachelor of Science in Quantity Surveying
20/U/0536 Ssemakula Musa	M	4.50	First Class Honours	Bachelor of Science in Telecommunication Engineering
20/U/0106 AMANYA Henry	M	4.50	First Class Honours	Bachelor of Science in Civil Engineering
20/U/0580 Akol Daphne	F	4.48	First Class Honours	Bachelor of Science in Quantity Surveying
20/U/6734/PSA Mwebaza Dennis	M	4.48	First Class Honours	Bachelor of Science in Civil Engineering
20/U/1306 Niwenziima Rinah	F	4.46	First Class Honours	Bachelor of Science in Electrical Engineering
20/U/1301 Kigobe Jethro Basa Mukisa	M	4.45	First Class Honours	Bachelor of Science in Electrical Engineering

20/U/0581 Ahereza Racheal	F	4.39	Second Class Honours (Upper Division)	Bachelor of Science in Quantity Surveying
20/U/0771 Elwor Gillian Otim	F	4.38	Second Class Honours (Upper Division)	Bachelor of Science in Mechanical Engineering
20/U/0785 Musiimenta Alfred Marvin	M	4.38	Second Class Honours (Upper Division)	Bachelor Of Science In Mechanical Engineering

3.2 Welcoming New Undergraduate Students in the 2025 Orientation



On August 5, 2025, CEDAT held an orientation event to welcome new undergraduate students. The program highlighted several key issues intended to guide students as they began their academic journey. Speakers emphasized the importance of taking pride in Makerere's reputation as one of Africa's leading institutions, encouraging students to study diligently, think critically, and innovate. They reminded students of available support systems, particularly counselling and guidance services, and cautioned them against impostors who target newcomers.

Discipline and adherence to university policies were underscored, with attention drawn to rules on academic appeals, examination irregularities, retakes, reinstatement, and the Anti-Sexual Harassment Policy. Students were urged to maintain integrity, avoid misconduct, and participate responsibly in extracurricular activities while building strategic networks. The orientation also celebrated the creative legacy of the Margaret Trowel School of Industrial and Fine Art, highlighting its role in Uganda's development since 1939 and reinforcing CEDAT's mission of transformative education and creative excellence. Mental health awareness was raised, with advice for students to seek support when facing challenges. Overall, the event stressed institutional pride, discipline, policy adherence, creative excellence, mental health awareness, and integrity as guiding principles for success. It marked the beginning of the students' journey at CEDAT, equipping them with inspiration, guidance, and a sense of belonging to a community committed to innovation and national development.

The background is a light orange color with a repeating pattern of various icons related to research and innovation. These icons include globes, lightbulbs, gears, bar charts, envelopes, and stylized human figures. The text 'RESEARCH INNOVATION' is faintly visible in the background, repeated in a grid-like fashion.

04

RESEARCH AND INNOVATION

RESEARCH AND INNOVATION

CEDAT's research agenda is aligned with Makerere University's commitment to expanding research output and addressing pressing societal challenges in engineering, design, art, and technology. Working in partnership with a wide range of stakeholders, staff, and students made significant strides in developing sustainable solutions, as evidenced in the publications, policy briefs, and innovations. These efforts reflect the University's research-led strategy and its drive to generate knowledge that responds to real-world needs.

4.1 Ongoing Research Activities

Table 8. Ongoing Research Projects

CEDAT continues to advance impactful research addressing national and global challenges in engineering, design, art, and technology. Faculty and students collaborate with partners to develop innovative solutions that promote sustainable development and strengthen the College's research leadership. Table 8 below shows some of the projects by staff and students.

Title	PI
Improving Tenure Security of Small Holder Farmers In Uganda- UN-Habitat	Prof. Moses Musinguzi
Beyond the Networked City: Building Innovative Delivery Systems for Water, Sanitation, and Energy in Urban Africa (off Grid project)	Dr. Robinah Nakawunde Kulabako
Collaborative Research Between KCCA and Makerere University, College of Engineering, Design, Art and Technology (CEDAT) –KCCA-MAK-CWIS project	
Urban Expansion –Cities Alliance /UNOPS	Dr.Tamale Kiggundu Amin
Volkswagen Foundation Grant No. 96659	Assoc. Prof. Peter Wilberforce Olupot



Title	PI
IMEU-Inclusive Markets for Energy Efficiency	Prof. J. B Kirabira
APPEAR	
LEAPRE	Dr. Hillary Kasedde
Volkswagen Foundation Grant No. 96655	Dr. Michael Lubwama
KTH Plastic	
CAMA Project	Dr. Jotham Sempewo Ivan
GCRF Africa Catalyst- Sustainable Infrastructure	Dr. Dorothy Okello
Campus Africa	
UNESCO CFIT-Higher Technical Education	
CAMA Project	Dr. Jotham Sempewo Ivan
03PLUS-Our Rights our Lives Our Furture	Ms. Apaire Lydia Namanya
TUMSEED Centre	Dr. Betty Nabuuma
Transfer of Delft based MSc/GPDP/OLC/OCC Program on Non Sewered Sanitation	Dr. Swaib Semiyaga
Intra -Africa Mobility Scheme –MIRET	Dr. Jonathan Serugunda
Master Project	Dr. Venny Nakazibwe
Volkswagen Foundation Grant No. 96659-1	Dr. Peter W. Olupot

Title	PI
1.Wabes Integrate	Prof. Niwagaba Charles
2.Pathogen	
The Meridian Institute Project	Dr. Karumba Andrew
Higher Education Partnerships in Sub Saharan Africa	Dr. Abubaker Waswa Matovu
Energy Trust Limited Project-Students Prototypes	Dr. Andrew Semakula Ayor
World Universities Network	Dr. Swaib Semiyaga
LIRA-U 21	Dr. Miyingo Emmanuel Wokulira
ACP-EU Culture Program East Africa	Prof. Kyeyune George

4.2 PUBLICATIONS BY STAFF

CEDAT staff continue to contribute significantly to scholarly research through publications in peer-reviewed journals, conference proceedings, and technical reports. These outputs highlight the College's growing influence in engineering, design, art, and technology, and reinforce its commitment to advancing knowledge and innovation.

1. Olupot, P.W., Ruwheza, C.G., Kavuma, E.M. et al. Optimization of Phosphates, Nitrates and Turbidity Removal from Handwashing Wastewater Using Char Byproducts from Sponge Iron Production. *Chemistry Africa* 8, 1557–1577 (2025). <https://doi.org/10.1007/s42250-025-01217-z>
2. Ayaa, F., Oyedotun, K., Lubwama, M. et al. Production and Characterization of Densified Briquettes From Nanocomposite Biochar-Cellulose Nanocrystal (Biochar-CNC) Reinforced with Polyvinyl Alcohol (PVA). *Waste Biomass Valor* 16, 2075–2095 (2025). <https://doi.org/10.1007/s12649-025-03005-9>

3. Kimuli, I., Kirabira, J. B., Nkambwe, I., Nakyejwe, S. L., Lubwama, M., Sendawula, K., & Nabaggala, N. K. (2025). Sustainable urban transportation planning: Integrating an electrified metro system into Kampala metropolis. *Multimodal Transportation*, 4(3), 100220.
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4.3 MAPRONANO ACE Drives Breakthroughs in Materials Science and Nanotechnology at Makerere University

The Africa Center of Excellence in Materials Product Development and Nanotechnology (MAPRONANO ACE) at Makerere University has recorded significant outputs in research, innovation, and training, positioning itself as a regional leader in applied science and engineering. Established with World Bank support, the center has delivered tangible products, advanced infrastructure, and capacity-building initiatives that directly address societal and industrial needs.

Among its flagship innovations, MAPRONANO ACE has developed Uganda's first locally designed two-cylinder petrol engine and a single-piston diesel engine, both tailored to meet agricultural and industrial demands. The center has also pioneered graphene-based battery pouch cells from agro-waste, offering sustainable energy solutions, and synthesized paramagnetic nanoparticles (PMNs) for DNA/RNA extraction kits. In response to the COVID-19 pandemic, the center produced rapid test kits and a nanoparticle vaccine delivery system made from locally available materials, tested successfully in pre-clinical trials.

Infrastructure outputs include a state-of-the-art Nanotechnology Laboratory equipped with Uganda's first high-resolution Scanning Electron Microscope (FE-SEM), a 3D printing facility, and advanced analytical equipment. These facilities have supported over 25 PhDs and 189 MSc students, while also providing consultancy services to industries and government labs.

Capacity-building outputs are equally notable: over 32 PhDs (93.75% completion rate) and 189 MSc graduates have been trained, alongside 444 professionals in specialized short courses. The center has facilitated 86 staff/student exchanges, supported accreditation of six national programs and one international MSc program, and engaged more than 40 industries in collaborative research and student placements.

4.4 Mental Health Symposium convened



Participants at the Mental Health Symposium held to address the growing mental health challenges among students

CEDAT held a Mental Health Symposium aimed at tackling the growing mental health challenges among students. The event, convened by College Guild Chairman **Senteza Edward** in collaboration with the Makerere Mental Health Club, brought together staff and students to openly discuss issues of depression, suicide, and drug abuse. The symposium was officially opened by **Prof. Moses Musinguzi**, Principal of CEDAT, who emphasized the importance of student-led initiatives in addressing mental health. He acknowledged that social, economic, and academic pressures made many, including himself, vulnerable to mental health struggles.

Keynote speaker **Ms. Evelyn Kharono Lufafa** from the Counselling and Guidance Centre highlighted the dangers of excessive academic pressure in competitive programs such as engineering, health sciences, and law. She offered practical strategies for managing stress, including personal reflection, breathing exercises, adopting a growth mindset, and seeking support from university resources.

A panel discussion featuring **Pastor Ronald Saazi**, **Dr. Gadner** from the Julius Nyerere Leadership Centre, and librarian **Birungi Khasfer** explored the broader mental health crisis in Uganda, where over 14 million people are affected. Panelists noted the rising prevalence of mental health challenges among young people, with factors such as

distractions, isolation, and academic demands contributing significantly. The symposium concluded with a call to action for both students and staff to prioritize mental health and utilize professional support services. The event underscored the urgent need for proactive measures and stronger support structures at Makerere University to safeguard student well-being.

4.5 Ministry of Defense and Veteran Affairs Engagement on Defense Research and Development Policy



Officials from the Ministry of Defense and Veteran Affairs (MODVA) in a consultative meeting at Makerere University.



The entourage inspected the Labs, led by staff at CEDAT

On November 26, 2025, the Ministry of Defense and Veteran Affairs (MODVA) held a stakeholder consultation at Makerere University's College of Engineering, Design, Art and Technology (CEDAT) as part of the ongoing development of Uganda's Defense Research and Development (R&D) Policy. The meeting brought together defense officials, academics, and subject-matter experts to align national security priorities with advanced research and innovation.

Prof. Moses Musinguzi, Principal of CEDAT, chaired the meeting on behalf of the Vice Chancellor, Prof. Barnabas Nawangwe. He emphasized the importance of predictable funding, clear institutional frameworks, and opportunities for staff and student involvement in building a modern and responsive defence R&D ecosystem. Makerere University reaffirmed its readiness to partner with MODVA in leveraging academic expertise to strengthen national security.

Brig. Gen. Richard Rubongoya, who led the MODVA and UPDF delegation, explained that the consultation was part of a strategic benchmarking exercise to understand challenges faced by universities and technical colleges. He highlighted the need to reduce dependence on foreign technology, strengthen stakeholder coordination, and establish robust R&D structures.

The engagement featured presentations from several university units, including the Colleges of Engineering, Natural Sciences, Health Sciences, and Food Technology, as well as the Biomedical Research Centre. Their contributions underscored the role of academia in addressing emerging security threats in areas such as food, ICT, and water. The consultation enriched the draft Defence R&D Policy by identifying opportunities for collaboration, knowledge exchange, and the development of dual-purpose innovations. It marked a significant step toward building a sustainable defense research ecosystem that supports Uganda's territorial integrity, socio-economic transformation, and regional security.

4.6 RUFORUM Engagement at CEDAT Calls for Shift to Applied Research



A section of the staff that attended the meeting in the CEDAT Boardroom

The **Regional Universities Forum for Capacity Building in Agriculture (RUFORUM)** convened a meeting on May 29, 2025 at CEDAT to discuss the critical role of research in driving national development. The meeting, attended by college leaders and staff, emphasized the urgent need to shift from basic research, which accounts for nearly 80% of current efforts, to applied research capable of generating revenue, creating industries, and providing employment opportunities.

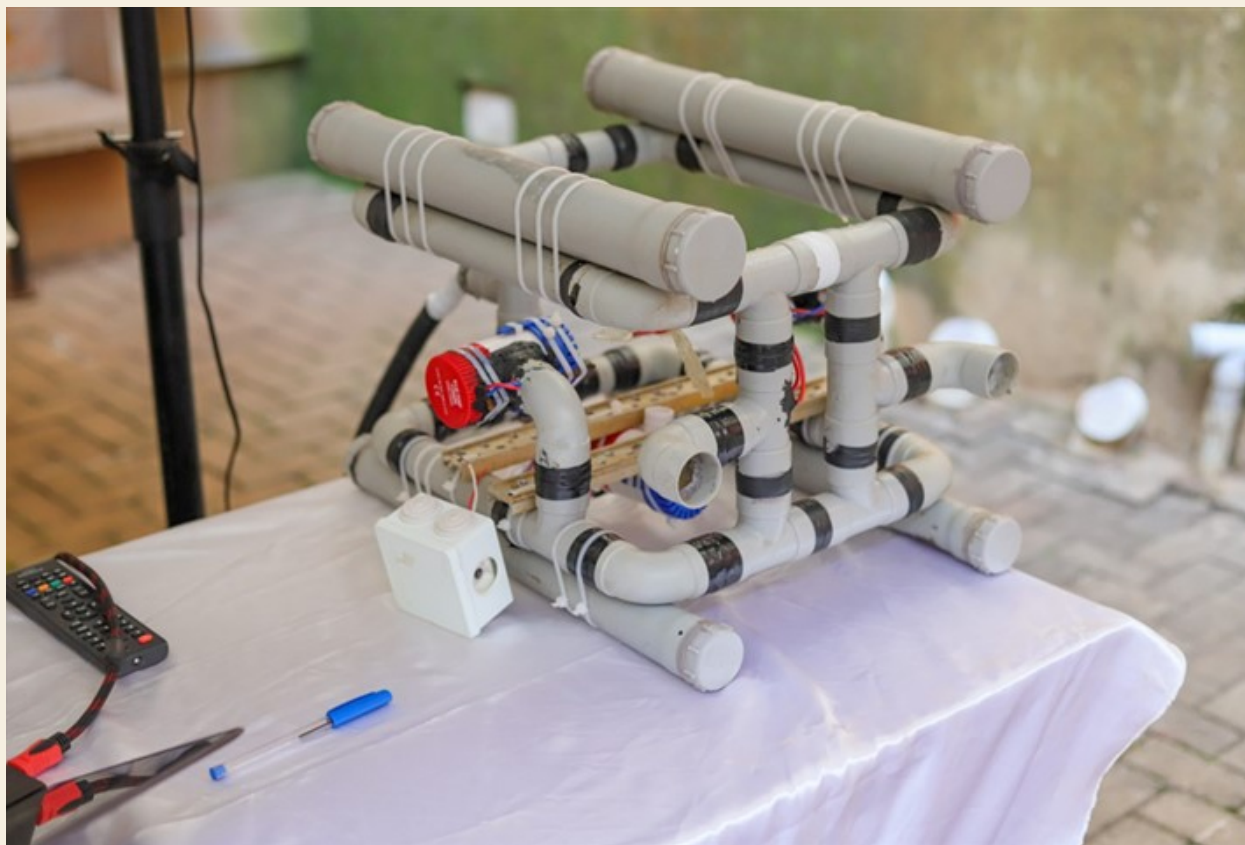
At the opening of the session, **Assoc. Prof. Kizito Maria Kasule**, Deputy Principal of CEDAT, underscored the importance of resource mobilization for

research, citing global examples where endowment funds have enabled universities to make significant advancements. He reiterated that research is the core mandate of universities and a foundation for sustainable growth, noting that in leading economies, research-driven innovation fuels industrial and economic progress.

The engagement highlighted the government's agenda to prioritize applied research, positioning universities as hubs of innovation rather than solely academic publishing. Discussions focused on commercialization, pilot testing, and refining support systems to ensure research outputs translate into tangible

economic impact. Insights were shared from the **Commercialization of Academic Research Initiative (CARI)**, backed by the Science, Technology, and Innovation Secretariat, which aims to strengthen Ugandan universities in developing enterprises aligned with the Fourth Industrial Revolution. Challenges identified included the lack of centralized access to prototypes and limited incubation support. Beneficiaries of CARI showcased breakthroughs such as **Freza Nanotech, Sensors for Precision Agriculture, the Spiral Wheel Pump, and Virtual Labs**, demonstrating the potential of applied research to transform industries and create jobs. The meeting concluded with a call for universities to prioritize innovation with measurable impact, ensuring research contributes meaningfully to Uganda's GDP and national development.

4.7 Advancing Innovation and Technology: Key Outputs from the CFIT III Workshop at Makerere University”



The School of Engineering recently hosted the UNESCO China Funds-in-Trust (CFIT III) Workshop on May 28, 2025, focusing on innovation, technology, and national development. The event brought together academics, industry leaders, students, and government officials to strengthen collaboration and highlight the role of universities in driving socio-economic transformation. College Principal Prof. Moses Musinguzi underscored innovation as a central pillar of higher education, while Dean Assoc. Prof. Dorothy Okello noted that the workshop capped a three-year CFIT project that introduced reforms such as graduate tracer studies, competence-based assessments, and gender-inclusive curricula.



The workshop showcased significant growth in student innovation, with participation expanding from just seven students in the first year to 350 applicants for innovation hub tours in 2025. This surge reflects Makerere's evolving role as a hub for engineering and technology-driven solutions. Industry partners, including Kira Motors, contributed to discussions on bridging academia and industry, while government representatives emphasized the importance of aligning education with national development goals.

Key outputs included curriculum reforms, stronger academia-industry ties, and a structured pathway for students from ideation to product development. The university also committed to deepening engagements with Uganda's Science, Technology, and Innovation Secretariat to expand the innovation ecosystem. Overall, the workshop reinforced Makerere University's leadership in advancing engineering, science, and technology, positioning it as a cornerstone of Uganda's innovation landscape.

4.8 Strengthening Research Capacity through Grant Writing Training

On **24th September 2025**, CEDAT hosted a grant writing workshop facilitated by Makerere University's **Grants Administration and Management Support Unit (GAMSU)**. The training brought together academic staff, researchers, and postgraduate students, equipping them with practical skills and strategies to secure both national and international research funding. Led by **Prof. Sylvia Antonia Nakimera Nannyonga-Tamusuza**, Head of GAMSU, the workshop covered the fundamentals of proposal development, exploration of diverse funding opportunities, and techniques for crafting

competitive grant applications. Participants were also introduced to **eMakGAM**, Makerere University's Grants Management System, which streamlines compliance, accountability, and the overall grant lifecycle.

Prof. Tamusuza emphasized GAMSU's commitment to mobilizing staff to actively pursue and win grants, noting that continuous engagements will be held to strengthen capacity across different levels. Future trainings will include finance managers, accountants, and project managers, ensuring a holistic approach to grants administration. She further encouraged academic staff to form multidisciplinary research teams, combining diverse strengths and competencies to enhance competitiveness in grant applications.

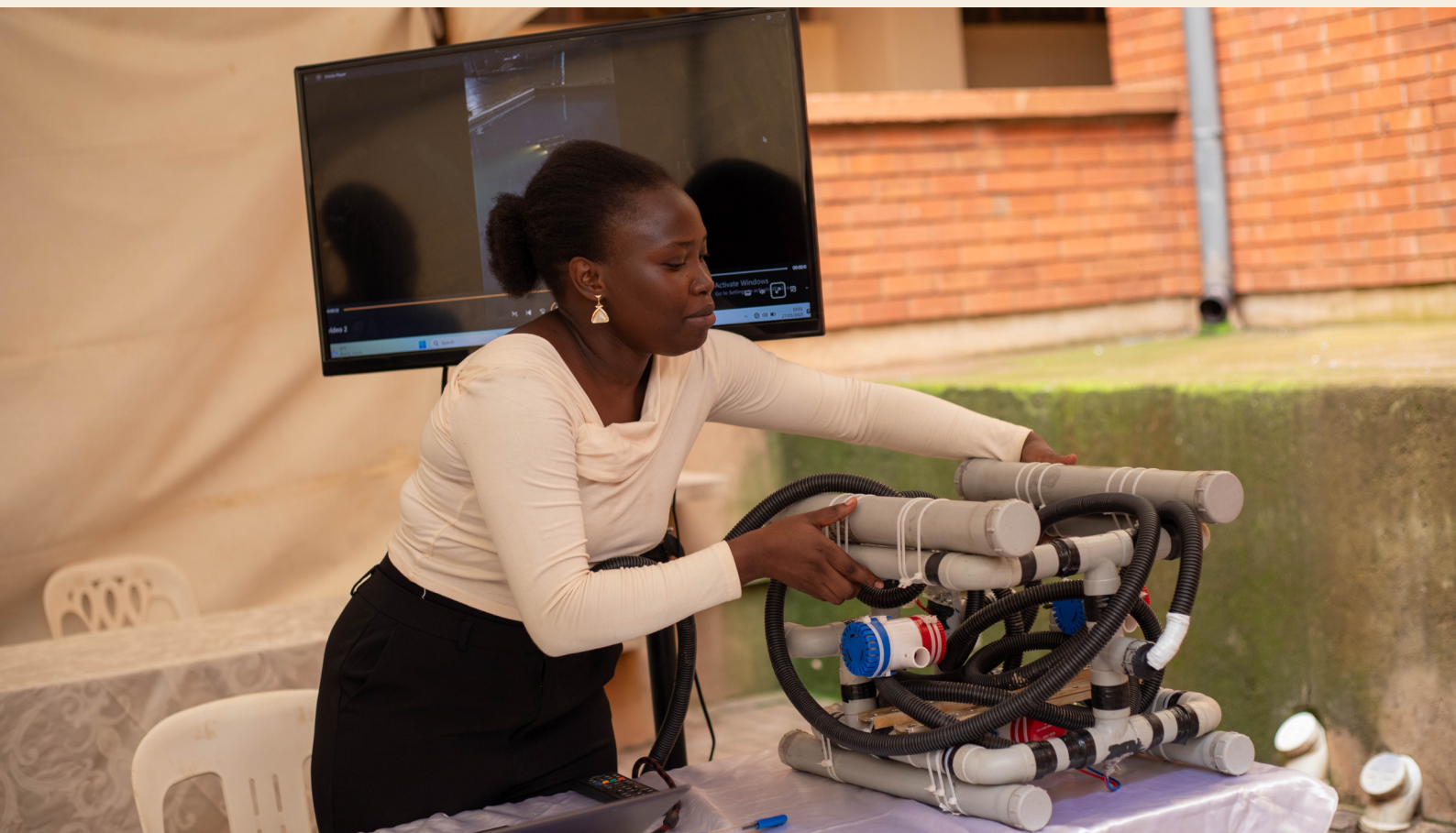
4.9 Global Engineering Delegation Wraps up the UNESCO Africa Week at Makerere

Makerere University hosted a distinguished delegation of engineers from across the globe to conclude the 11th UNESCO Africa Engineering Week and the 9th African Engineering Conference. The visit underscored the University's commitment to fostering innovation, interdisciplinary collaboration, and impactful partnerships across Africa and beyond. The delegation engaged with faculty, students, and ongoing research initiatives shaping the continent's engineering future. They toured key centers of excellence, including the College of Computing and Information Science (CoCIS), the Makerere University Innovation Pod (UniPod), and CEDAT.



Prof. Julian Cox (left) and Prof. Dorothy Okello (right).

Among the visitors were Prof. Francis Davis (KNUST, Ghana), Prof. Julian Cox (University of New South Wales, Sydney), Ms. Catriona Macarthur and Eng. Wahid Azizi (Royal Academy of Engineering), and Eng. Kazawadi Papias Dedeki, President of the Federation of African Engineering Organizations (FAEO). Their presence highlighted Makerere's role as a hub for innovation and leadership in engineering education.





05

KNOWLEDGE TRANSFER AND PARTNERSHIPS



5.0 KNOWLEDGE TRANSFER AND PARTNERSHIPS

CEDAT continues to strengthen its role as a bridge between academia, industry, and society through impactful collaborations. By engaging with local and international partners, the college ensures that research outputs and innovations are translated into practical solutions. These partnerships not only expand opportunities for students and staff but also drive national development through shared expertise and applied knowledge.

5.1 CEDAT Leads Reform Drive in Uganda's Engineering Sector



The School of Engineering is spearheading a transformative initiative to strengthen Uganda's engineering landscape through legislative engagement, academic collaboration, and industry integration. The effort anchored in a comprehensive memorandum presented to Parliament on the proposed Engineering Professionals Bill 2024, developed through wide consultations with academia and industry stakeholders. Following the submission, a high-level meeting was convened on July 3, 2025, at CEDAT, bringing together officials from the Ministry of Works and Transport, representatives from the Engineers Registration Board (ERB), and deans from universities across Uganda, including Gulu, Muni, Busitema, Kyambogo, Mbarara University of Science and Technology, and Uganda Christian University.

Among the major proposals discussed was the formation of a Forum of Deans of Engineering Schools to harmonize academic standards, foster joint research, and enhance policy dialogue. The ERB is expected to provide oversight and legitimacy to the initiative, ensuring alignment with professional standards.

Another highlight was the proposed creation of a Bureau of Industry–Academia Linkages, envisioned as a national clearinghouse for technical challenges from industry. The Bureau would channel these challenges into university research, student projects, and innovation programs, bridging the gap between theoretical training and practical application. Stakeholders emphasized the need for sustainable funding, skilled staffing, and robust digital infrastructure to support the Bureau’s operations. Key performance indicators would include the number of industry challenges addressed, student projects aligned with real-world problems, and growth in internship and graduate placements.

5.2 ‘Next Generation Green Minds’ win the GAIathon Innovation Challenge

Team ‘Next Generation Green Minds’ won the GEO-Africa Incubator/Accelerator Innovation Challenge 2025 (GAIathon) after a fierce competition with the other two teams, Geo Spec, which was the runner-up, and Team Geo Smart, which took third place. The three teams received cash prizes of US Dollars 300 for the winner, 200 for the second place, and 100 for third. The three teams were part of the 12 competitors who pitched their ideas earlier.

Team Next Generation Green Minds represented CEDAT in the Africa-wide competition in Ghana from July 18th to 21st, 2025, which had fifteen contenders from all over Africa. ‘We’re building a web-based IoT platform that helps farmers make real-time decisions on when, how, and what to irrigate, thereby boosting crop yields while conserving resources,’ said the team leader of the trio, who are Master’s students in Geographical Information Science and Technology at CEDAT.



Meet the winners, Team Next Generation Green Minds

The trio developed a web-based system, the Smart Irrigation Advisory System, which allows the farmer to get timely information from the satellite, indicating when one should irrigate or water their crops, the time, and the amount of water needed. This was in response to the day-to-day challenges whereby most farmers react to this after seeing the plants wilt, an indication that the plant is already damaged by the time they irrigate. Using the satellite and remote sensing techniques, they came up with the innovation to ensure having a system that helps the farmers pick information for action. The competition, which was organized under the theme “Empowering Innovation through Digital Literacy,” the GAIAthon competition was held with different sub-themes, challenging students to present their innovative ideas. They were expected to demonstrate their skills with remote sensing and utilize various satellite products using different techniques. There were three tracks, one of which was developing a web-based platform, developing an Internet of Things platform, and developing an application linking it to policy.

5.3 Department of Industrial Arts and Applied Design (DIAAD) Hosts First-Ever Bachelor of Industrial Arts and Applied Design (BIAAD) Exhibition



On July 17, 2025, the studios at the Margaret Trowell School of Industrial and Fine Art (MTSIFA) came alive with creativity as the Department of Industrial Arts and Applied Design (DIAAD) unveiled its inaugural Year Three students' exhibition for the Bachelor of Industrial Arts and Applied Design (BIAAD) programme. The event marked a historic milestone for the department, showcasing the achievements of the pioneer class admitted in 2022. Despite challenges posed by the COVID-19 pandemic, blended learning models, and balancing employment with studies, nearly 30 students presented final projects that embodied resilience, adaptability, and innovation.

The exhibition featured diverse disciplines including fashion design, ceramics, textiles, weaving, jewellery, wood and metal fabrication, painting, and sculpture. Each display reflected community-centered research, positioning design as a transformative tool for addressing societal challenges. The works aligned with Uganda's skilling agenda, emphasizing hands-on training, creativity, and employability. DIAAD highlighted its collaboration with MAK Unipod, a hub for interdisciplinary design, prototyping, and product development. This partnership provided students access to advanced technologies, fabrication tools, and entrepreneurial mentorship, enabling them to translate conceptual ideas into tangible solutions. The integration of academic inquiry with real-world relevance underscored Makerere's commitment to practice-led research and innovation. The exhibition was celebrated not only as a showcase of artistry but also

as the birth of new voices in Uganda's visual art and design ecosystem. DIAAD's trailblazing graduates demonstrated that design is more than aesthetics, it is a driver of change, innovation, and community impact.

5.4 The International Conferences on Industry Integration and Great Lakes Research convened



CEDAT hosted two major international conferences from July 21–23, 2025: the International Conference on the Cooperation and Integration of Industry, Education, Research and Application, and the International Conference on Great Lakes Research. The events brought together scientists, policymakers, and industry leaders to discuss innovation, sustainability, and ecological challenges facing the region.

At the Great Lakes Forum, emphasis was placed on Lake Victoria's ecological and socio-economic importance to East Africa. Researchers highlighted threats posed by climate change, sedimentation, declining water quality, and reduced vegetation cover in the catchment area. Scientific research was identified as critical for generating data to guide decision-makers in protecting the lake. Participants called for stronger international partnerships and networks to build capacity, enhance laboratory infrastructure, and produce evidence-based solutions.

The conference also showcased ongoing research projects. One team is using remote sensing technology to detect and monitor plastic pollution in freshwater environments,

particularly Lake Victoria. By examining how plastic litter interacts with light and conducting in-situ measurements of common plastics, researchers aim to refine algorithms for satellite-based detection. Findings revealed that plastic pollution is becoming endemic along fishing villages and beaches, with microplastics detected in Nile perch. The project seeks to establish a spectral reference library to support monitoring and management of plastic waste in inland waters.

Associate Professor Anthony Gidudu from CEDAT pointed out the significance of the International Conference on the Great Lakes Researcher, which brings together scientists from diverse backgrounds to share their work on lake health, management issues, and water quality. The conference, which was in its third iteration, was previously in China and Kazakhstan, and in 2025 it focused on Lake Victoria.



Prof. Anthony Gidudu's research team is working on a project to use remote sensing technology to detect and monitor plastic pollution in freshwater environments, specifically in Lake Victoria. The team is exploring how plastic litter interacts with light in freshwater environments, leveraging the capabilities of satellite images to identify and detect plastic pollution. They are conducting in-situ measurements of the spectral properties of common plastics found in the environment, examining the influence of different background surfaces on plastic detection.

5.5 The Geomatics and Land Governance Conference held successfully



The College of Engineering, Design, Art and Technology (CEDAT) hosted the first-ever Joint 8th Advances in Geomatics Research Conference (AGRC) and 14th Eastern Africa Land Administration Network (EALAN) Conference from July 31 to August 1, 2025, at Kabira Country Club in Kampala. The event brought together participants from Kenya, Tanzania, Rwanda, Burundi, Ethiopia, and South Sudan, reflecting regional commitment to advancing land governance.

Hon Judith Nabakooba, the Minister of Lands, Housing, and Urban Development presided over the event, emphasizing the importance of accurate geospatial data and effective land management for sustainable development. She highlighted ongoing reforms in Uganda's land administration systems, including expansion of the Land Information System and exploration of blockchain technology to enhance transparency and efficiency. Keynote addresses underscored the need for financing innovation, harmonized policies, and citizen-centered reforms to strengthen land administration systems. Speakers warned that outdated records, limited access to land information, and conflicting legal frameworks continue to undermine security and investment. They called for stronger collaboration between academia, government, and the private sector to generate practical solutions. The conference provided a platform for sharing research, building partnerships, and advancing technological transformation in geomatics and land administration. Makerere's role as host reinforced its leadership in shaping regional dialogue on land governance and sustainable development.

5.6 Partnership with Nile Basin Discourse on Water Governance Project



The Department of Civil and Environmental Engineering entered a partnership with the Nile Basin Discourse (NBD) to implement a World Bank-funded, two-year project aimed at strengthening transboundary water resource management in East Africa. The collaboration was formalized during a meeting held on June 5, 2025, at CEDAT. The initiative seeks to employ citizen science approaches to involve local communities in water governance, data collection, and policy formulation. By integrating community perspectives, the project aims to enhance participation, improve water data collection methods, and strengthen policy frameworks for sustainable water use across the region.

During the meeting, NBD leadership engaged with Makerere representatives to discuss strategies for effective implementation. Discussions emphasized the importance of regional cooperation in addressing growing concerns over resource sustainability, climate change, and environmental challenges.

Officials from CEDAT led by Dr. Robinah Kulabako highlighted the role of academia in providing technical expertise and research capacity to support evidence-based decision-making. The partnership is expected to foster collaboration between universities, policymakers, and civil society organizations, ensuring that water governance frameworks are inclusive and responsive to community needs. The project also aligns with broader regional efforts to promote equitable access to water resources and mitigate conflicts arising from transboundary management. By leveraging citizen science and academic research, the initiative aims to build stronger institutions and policies that safeguard water resources for future generations.

5.7 CEDAT Signs MOU to Strengthen Digital Learning



The College of Engineering, Design, Art and Technology (CEDAT) signed a Memorandum of Understanding (MOU) with the Project Management Committee of the “Enhancing the Distance Education Environment at Makerere University” initiative, formalizing the operational framework for a newly installed micro studio at the college. The agreement, signed on June 25, 2025 represents a significant step in strengthening the university’s digital learning infrastructure.

The micro studios, managed by CEDAT are part of a broader \$12.2 million (UGX 44 billion) grant from the Korea International Cooperation Agency (KOICA), launched in February 2025 to enhance Makerere’s Open, Distance, and e-Learning (ODEL) capabilities. The MOU establishes a shared commitment to managing the studios and associated equipment, ensuring they serve as a cornerstone for the university’s digital transformation. Officials highlighted that the system will help address challenges in graduate training and research, including delays in completion and difficulties in tracking student progress. By integrating with existing academic management systems, the initiative is expected to improve efficiency, accountability, and compliance with institutional policies.

The rollout comes at a time when Makerere is expanding its graduate student enrollment, with ambitious plans to increase participation from 19 percent to 30 percent by 2030. However, challenges remain, including staff shortages and heavy supervision workloads,

with some faculty overseeing more than eight graduate students. Funding constraints for graduate students were also flagged as pressing issues requiring attention from university leadership. Despite these hurdles, the launch of the micro studios and the formalized partnership with KOICA mark a major advancement in Makerere's digital learning journey. The initiative underscores the university's commitment to leveraging technology to expand access, improve quality, and position itself as a research-led institution.



Dr. Shon Jin Gon, Project Manager at the Korea Institute for Development Strategy (KDS), represented the implementing partner during an event held on Wednesday, 25th June 2025.

5.8 CEDAT participation at the National Science week



The College of Engineering, Design, Art and Technology participated in the National Science Week 2025 at Kololo Independence Grounds that brought together innovators, researchers, and entrepreneurs to highlight Uganda's advancements in science, technology, and innovation. Organized by the Science, Technology, and Innovation (STI) Secretariat under the Office of the President, this annual event served as a strategic platform for showcasing groundbreaking inventions, fostering collaboration, and driving research toward market-ready solutions. The event was held from June 15th to 20th 2025, under the theme; "Made in Uganda: Innovation to Market", emphasizes the country's growing capacity to transform local ideas into commercially viable products.

Participants included over 300 Ugandan innovators, leading researchers, and students from institutions such as Makerere University's College of Engineering, Design, Art, and Technology. Their presence underscores Uganda's commitment to nurturing home-grown scientific talent and promoting entrepreneurship. Other activities during the exhibition included panel discussions, and live demonstrations of pioneering technologies. Government officials, investors, and international delegates engaged in conversations on scaling local innovations to global markets.

5.9 Occupational Safety, Health and Environment (OSHE) Engagement with Ministry of Gender, Labour and Social Development



On November 21, 2025, the School of Engineering deepened its commitment to workplace safety and sustainability through a strategic dialogue with the Ministry of Gender, Labour and Social Development. The OSHE project team, supported by the Royal Academy of Engineering, met Commissioner Eva Katusabe and her staff to share findings from recent safety audits at Roofings Limited and Isimba Hydro Power Dam, and to explore how academic research can inform national policy.

Discussions focused on standardizing certification pathways for OSHE practitioners, strengthening enforcement of safety regulations, and embedding OSHE into academic curricula and short courses. Both parties emphasized that aligning labour rights with safety protocols is critical to reducing Uganda's high workplace accident rates.

Dr. Abubaker Waswa, Principal Investigator of the OSHE project, underscored the role of academia in bridging research, industry realities, and government priorities. Commissioner Katusabe welcomed the collaboration, noting its alignment with the Ministry's mandate to advance labour rights. This engagement marked a pivotal step toward stronger national safety frameworks, positioning Makerere University as a key partner in shaping sustainable development through occupational safety and health innovation.

5.10 Department of Architecture Studio Refurbishment



R-L: Arch. Kenneth Ssemwogerere (Head of Department, Architecture), Dr. Kizito Maria Kasule (Deputy Principal, CEDAT), and Mr. Moses Kato (Plascon Uganda National Sales Manager) during the official handover of a donation at the College of Engineering, Design, Art and Technology (CEDAT), Makerere University, on Tuesday, 25th June 2025.

The Department of Architecture embarked on a major refurbishment of its design studios in **July 2025**. This initiative represents a pivotal investment in enhancing the learning environment for architecture students and fostering innovation in design education. The initiative received a significant boost from **Kansai Plascon Uganda Limited**, which generously donated **UGX 15 million worth of paint**. The donation was handed over on **24th June 2025** by Mr. Moses Kato, National Sales Manager of Kansai Plascon, in a ceremony witnessed by the Deputy Principal of CEDAT, Prof. Kizito Maria Kasule, Dr. Amin TaM Kiggundu (Head of the Department of Regional and Urban Planning), academic staff, and students.

Arch. Kenneth Ssemwogerere, Head of the Department of Architecture, expressed deep gratitude for the support and emphasized the broader vision of the refurbishment: *“This is more than a renovation, it is an investment in the next generation of the architects.”* He further called upon alumni, practicing architects, and stakeholders in construction sector to join the cause. The refurbishment aims to create **dynamic, functional, and inspiring studio spaces** that reflect the evolving needs of architectural training. By modernizing facilities, the department seeks to strengthen its reputation as a hub for creativity, professional excellence, and industry collaboration.



Inside one of the CEDAT studios slated for renovation following the donation handover on Tuesday, 25th June 2025.



Eye-catching creative works inside one of the studios set to benefit from the upcoming facelift

5.11 CEDAT Seals a Partnership with Sogea Satom to Bridge Academia and Industry



Mr. Marc Grechi, Country Director for Sogea Satom (L) Prof. Moses Musinguzi, Principal CEDAT pose for a picture after signing the MOU, January 28th, 2025.

CEDAT entered into a partnership with Sogea Satom, a subsidiary of VINCI Construction, aimed at strengthening ties between academia and industry. The memorandum of understanding (MoU), signed on January 28, 2025, by Mr. Marc Grechi, Country Director of Sogea Satom, and Prof. Moses Musinguzi, Principal of the College of Engineering, Design, Art and Technology (CEDAT), seeks to foster research, innovation, and talent development. During the ceremony, Dr. Abubaker Wasswa Matovu, representing the Dean of the School of Engineering, emphasized the university's commitment to addressing industry challenges through cutting-edge research, particularly in the energy sector. He noted that students would benefit from industrial attachments and internships, which could inspire final-year projects tackling real-world problems.

Mr. Grechi highlighted Sogea Satom's extensive operations in Africa and its notable contributions to Uganda's infrastructure since 1990, including the Katosi Water Treatment Plant. He underscored the importance of attracting Ugandan talent and familiarizing students with the company's operations to prepare them for professional careers.

CEDAT Principal Prof. Musinguzi welcomed the collaboration, pointing to opportunities such as guest lectures, industry demonstrations, and support for laboratory facilities. He

stressed the need to equip students with practical skills and urged Sogea Satom to contribute to strengthening CEDAT's technical capacity. This partnership is expected to drive significant advancements in research and innovation, while providing students with hands-on industry experience. It represents a strategic step toward bridging the gap between academia and industry, positioning Makerere University as a hub for applied research and professional development in Uganda.

5.12 Bridging Theory and Practice: CEDAT and Kiira Motors Collaborate to Redefine Engineering Education



(L-R) Mr. Andrew L. Watchorn, Prof. Dorothy Okello and Mr. Paul Isaac Musasizi with copies of the School of Engineering Strategic Plan 2025-2030

The School of Engineering, in partnership with Kiira Motors Corporation, hosted a transformative workshop under the UNESCO-CFIT III Industry Guest Lecture Series. The session was designed to prepare graduates for modern workforce realities by bridging classroom theory with industry demands. Faculty, students, and industry stakeholders engaged in interactive discussions facilitated by Andrew L. Watchorn, lecturer at Kettering University and PhD student at Purdue University.

Watchorn emphasized the importance of experiential learning, innovation-driven curricula, and interdisciplinary approaches to engineering education. Drawing from his diverse career journey, he challenged the static nature of traditional teaching, stressing that professional judgment, teamwork, and confidence are as critical as technical

knowledge. He introduced a framework built on five pillars, trust, joy, openness, courage, and connection, arguing that these create holistic learning environments that empower students to thrive in dynamic professional contexts.



Participants explored mindfulness exercises to strengthen self-awareness, a skill Watchorn described as essential for critical thinking. Case studies, including the Flint Water Crisis, highlighted the risks of ignoring cultural and social contexts in engineering solutions. The workshop reinforced the need for engineers to integrate human factors into their designs to ensure solutions are both technically sound and socially sustainable.

Prof. Dorothy Okello, Dean of the School of Engineering, situated the workshop within the School's Strategic Plan (2025–2030). She emphasized the importance of academia-industry partnerships, particularly with Kiira Motors, and challenged faculty to develop frameworks that certify soft skills alongside technical competencies. By introducing practical tools such as the Sunshine and Shadow Framework and agile Change Management principles, the workshop equipped attendees to navigate organizational change and integrate human-centered approaches into engineering education. This collaboration reaffirmed CEDAT's commitment to producing graduates who are innovative, adaptable, and responsive to societal needs.

5.13 Empowering Africa's Future: CEDAT Hosts the First ReSus Summer School



Prof. Peter W. Olupot, Head of the Department of Mechanical Engineering at CEDAT and team lead of the Summer School

Makerere University proudly hosted the inaugural cohort of the ReSus Summer School Series from August 3–12, 2025, under the theme “Renewable Resources for Sustainable Development in Africa (ReSus-AFRICA).” The program convened 21 outstanding PhD students and postdoctoral researchers from across Africa to explore innovative, interdisciplinary approaches to sustainability through renewable resources.

Speaking at the event, Prof. Robert Wamala, Director of Research, Innovations and Partnerships, urged participants to carry forward the networks and collaborations forged during the program. He emphasized the importance of sustained research, bold innovation, and translating ideas into tangible actions that positively impact communities across the continent.

Assoc. Prof. Dorothy Okello, Dean of the School of Engineering, commended the cohort for their contributions and highlighted the Summer School’s alignment with Makerere’s vision of becoming a research-led institution. She extended appreciation to the Volkswagen Foundation Germany for its generous support, noting that the initiative invests in Africa’s future by equipping researchers with practical skills in renewable resource management and fostering South–South knowledge exchange.

Assoc. Prof. Peter W. Olupot, Head of the Department of Mechanical Engineering at CEDAT and team lead of the Summer School, outlined the long-term vision of the series. He announced that subsequent editions will be hosted in Nairobi, Kenya (2026) and Côte d'Ivoire (2027), focusing on renewable materials, renewable energy, and circularity with resource reuse.



The first Summer School attracted participants from Kenya, Uganda, Ethiopia, South Africa, Tanzania, Ghana, Nigeria, and Côte d'Ivoire, reflecting the program's commitment to interdisciplinary collaboration and building a robust network of African researchers dedicated to sustainable development.

5.14 CEDAT Champions Practical Learning by supporting Real-Life Projects



(L-R) Dr. Oscar Mugula, Coordinator of the Center for Lifelong Learning at CEES; Prof. Anthony Mugagga, CEES Principal and representative of the Vice Chancellor, Prof. Barnabas Nawangwe (2nd right)(L-R) Dr. Oscar Mugula, Coordinator of the Center for Lifelong learning

CEDAT continues to demonstrate its leadership in student-centered, hands-on education. In partnership with the Centre for Lifelong Learning at CEES and the Uganda Vocational and Technical Assessment Board (UVTAB), CEDAT played a central role in the successful construction and handover of a perimeter wall fence at Makerere College School. The project was executed by technical students pursuing higher diplomas in Civil Engineering and Architecture, with CEDAT providing access to laboratories, workshops, studios, and technical expertise. Prof. Moses Musinguzi, Principal of CEDAT, congratulated the students and emphasized that the commissioning of the wall fence reflects the College's commitment to teaching learners how to solve real community problems. He noted that CEDAT is exploring innovative assessment models, including increasing continuous assessment to 60%, and engaging students in infrastructure maintenance across the university to strengthen practical training.

The initiative showcased CEDAT's philosophy of bridging theory and practice. By involving students in real-life projects, the College ensures that graduates acquire not only technical knowledge but also the confidence, teamwork, and problem-solving skills needed to contribute directly to national development. Prof. Musinguzi stressed that

scientists and engineers must be visibly engaged in Uganda's transformation, and CEDAT is determined to lead this charge.



A group of enthusiastic students engaged in real-life vocational training projects as part of the TVET curriculum witnessed the handover of the completed project

With 173 students enrolled in the program, 28 of them feM, the project achieved a 99% pass rate, underscoring the effectiveness of experiential learning. Beyond the wall fence, students also constructed a drainage system and hostel yard, demonstrating their capacity to deliver tangible solutions. CEDAT's involvement in this initiative reaffirms its role as a hub of innovation and practical education, aligning with Makerere University's strategic vision and Uganda's National Development Plan IV. By embedding real-life projects into its teaching, CEDAT is shaping graduates who are not only academically competent but also industry-ready and socially responsive.

5.15 The Department of Construction Economics and Management Explores Asset Securitization Collaboration with Uganda Securities Exchange



A delegation from the Department of Construction Economics and Management, led by Head of Department Dr. Nathan Kibwami, during an engagement visit.

A high-level delegation from the Department of Construction Economics and Management, CEDAT, led by Head of Department Dr. Nathan Kibwami, engaged the Uganda Securities Exchange (USE) in strategic discussions aimed at unlocking new financing avenues for Ugandan businesses through asset securitization. Accompanied by staff members Ronald Kaweesi and Tulikuno Collins, the delegation met with USE officials to explore collaborative opportunities focused on transforming both tangible and intangible assets into viable financial instruments for small and medium enterprises (SMEs). Among the key proposals was the development of a **postgraduate programme in securitization of tangible assets**, designed to build local expertise in asset-backed financing and capital markets. The team also discussed **guest lecturing opportunities** on the Bachelor of Science in Valuation programme, aiming to enrich academic instruction with practical insights from Uganda's financial sector.

The dialogue emphasized the importance of building synergies between academia and capital markets to guide Ugandan businesses, particularly SME, in leveraging

their asset portfolios to access financing. This initiative is expected to enhance financial inclusion and stimulate economic growth by empowering enterprises to tap into alternative funding mechanisms. Dr. Kibwami noted that the partnership could “reshape how Ugandan businesses perceive and utilize their assets, not just as operational tools, but as strategic financial resources.”

The Uganda Securities Exchange welcomed the initiative, highlighting its alignment with ongoing efforts to deepen Uganda’s capital markets and support enterprise development. This collaboration marks a significant step toward bridging the gap between academic research, professional training, and real-world financial innovation.

5.16 Discourse to Strengthen Industry–Academia Collaboration



CEDAT hosted an Industry–Academia Exchange workshop on April 16, 2025, aimed at bridging the gap between higher education and the labor market. The event, organized by the School of Engineering, brought together academics, industry leaders, and government officials to discuss skills development, innovation, and employability. The Dean, Dr. Dorothy Okello, Dean emphasized the importance of continuous engagement with industry to ensure graduates acquire relevant skills. She proposed that such exchanges be held every two to three years, with industry representatives contributing to curriculum design to align education more closely with market needs.

Keynote speaker Eng. Israel Kamoga, Local Content Capacity Building Lead at the East African Crude Oil Pipeline (EACOP), urged trainers to embrace research and integrate emerging technologies into teaching. He stressed that building national content required employing local expertise and companies. Mr. Patrick Mbonye, Group CEO of Q-Sourcing Servtec Uganda, encouraged lecturers to involve industry experts in student assessments, noting that innovation thrives when students interact directly with practitioners.

A panel discussion under the theme “From Collaboration to Co-creation” featured experts from academia, industry, and government, including Eng. Timothy Mubbala, Dr. Catherine Wandera, Dr. Rebecca Kiconco, and Natasha Kassami Musinguzi. Panelists underscored the importance of competence-based curricula, exposure to industry sites, and purposeful skill development.

5.17 “Best of Me” Exhibition Showcases Artistic Excellence at Makerere University



Makerere University’s Art Gallery/Institute of Heritage Conservation and Restoration concluded the 2025 edition of the “Best of Me” exhibition with a vibrant closing ceremony on October 28, 2025. Organized by the Margaret Trowel School of Industrial and Fine Art (MTSIFA), the showcase featured final-year projects and recent works by students and alumni, transforming the gallery into a dynamic space of creativity, reflection, and cultural dialogue.

Presiding over the ceremony, Hon. Ruth Nankabirwa Sentamu, Minister for Energy and Mineral Development and a distinguished alumna of MTSIFA, commended the students for their resilience, boldness, and exceptional creativity. She described the exhibition as a testament to the transformative power of visual storytelling, noting that the works reflected both technical mastery and cultural relevance. Nankabirwa urged students to challenge conventions and use their creativity to influence industry, policy, and community development. Drawing parallels with innovations such as the Kira Motors buses, she emphasized the essential role of artists in shaping Uganda's industrial landscape.



Hon. Ruth Nankabirwa Sentamu, Minister for Energy and Mineral Development and distinguished alumna of MTSIFA, listens as a student exhibitor explains the inspiration behind their artwork during the closing ceremony of the 2025 “Best of Me” exhibition.s

In her welcome remarks, Dr. Venny Nakazibwe, speaking on behalf of Dean Dr. Amanda Tumusiime, praised the exhibition as a compelling expression of talent, innovation, and personal growth. She highlighted the diversity of works drawn from the departments of Visual Communication Design and Multimedia, Industrial Art and Applied Design, and Fine Art, noting that each piece represented both technical skill and a journey of self-discovery.

The exhibition featured a wide range of disciplines, including painting, sculpture, textiles, photography, ceramics, and fashion design. For many students, “Best of Me” marked a

pivotal transition from academic training to professional practice. The closing ceremony reaffirmed Makerere University's role as a home of innovation, celebrating art as a powerful force for identity, resilience, and societal transformation.

5.18 Makerere Workshop Strengthened Industry–Academia Collaboration



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5.19 Exhibition Positions Art as a Tool for Decolonisation



Makerere University placed art at the center of its Second Biennial Narrative Practices Conference, unveiling an exhibition that reimagined myths and everyday life through visual storytelling. The two-day event, held December 10–11 at the Public Health Auditorium, ran under the theme *Beyond the Ivory Tower: Our Stories, Our Spaces, and Decolonial Visions*.

The exhibition, curated by the Margret Trowel School of Industrial and Fine Art (MTSIFA), featured striking images of elephants, masked dancers, fenced women, para-athletes, and elders by the hearth. Each piece reframed cultural myths and everyday practices, echoing narrative therapy’s insight that identities are continually authored through stories. Organizers said the works challenged stereotypes, confronted silences, and invited audiences to engage with African realities in transformative ways.

Dr. Ritah Nabuyungo Edopu, head of the Department of Fine Art at MTSIFA, emphasized the importance of art in shaping dialogue. “Art allows us to confront realities that statistics alone cannot capture,” she said. Attendees noted that the showcase sparked

conversations about identity, resilience, and inclusion.

The exhibition also highlighted career relevance for Fine Art students, demonstrating opportunities beyond the studio in fields such as curation, cultural research, education, and community development. Through paintings, performances, and curated narratives, the showcase explored themes of vulnerability, ecological knowledge, and community justice. By revisiting myths such as *Kintu and Nambi* and *Gipir and Labongo*, the works challenged colonial ethnographies while foregrounding marginalized voices.



Organized by Makerere's Department of Fine Art in collaboration with partners including Smith College School for Social Work (USA) and regional child-focused organizations, the conference underscored the university's mission of inclusion, innovation, and societal transformation. Far from peripheral, the exhibition positioned art as a catalyst for decolonisation, making unseen voices visible and forgotten histories unforgettable.



5.20 Uganda Launches Consortium of University Engineering Deans (CUED-U)



Uganda's engineering education sector marked a historic milestone on September 17, 2025, with the launch of the Consortium of University Engineering Deans in Uganda (CUED-U) at Speke Resort, Munyonyo. The event, held as a side session during the 11th UNESCO Africa Engineering Week and 9th African Engineering Conference, united deans from public and private universities under the theme "Building a Collective Vision for Engineering Education."

Hon. Dr. Monica Musenero, Minister for Science, Technology, and Innovation Information, delivered the keynote address and officially inaugurated the consortium. She emphasized the importance of coordinated leadership in advancing Uganda's engineering profession and aligning education with national development priorities.

The idea for CUED-U was first proposed during a July 3, 2025 meeting at Makerere University's School of Engineering. Interim Chair Eng. Dr. Henry K. Ntale, Dean of Engineering and Survey at Ndejje University, described the launch as historic, noting that Uganda has grown from one university offering engineering to 13 institutions — eight public and five private. He said the consortium would streamline government engagement and strengthen international partnerships.

CUED-U's mandate includes coordinating research in priority areas such as infrastructure, renewable energy, agriculture technology, and digital transformation; fostering industry partnerships to align curricula with market needs; supporting national policy development with evidence-based expertise; and positioning Uganda as a regional leader in engineering education.

Dr. Dorothy Okello, Dean of Makerere University's School of Engineering, expressed gratitude to UNESCO and the Royal Academy of Engineering for their support. She urged institutions to translate exposure into action, framing CUED-U's launch as a pivotal moment for Ugandans to "take charge of our own journey."

The consortium is expected to play a central role in shaping engineering education, research, and innovation across Uganda and East Africa.

5.21 Dr. Seith Mugume Appointed Lead Author for IPCC AR7

Dr. Seith Mugume, Senior Lecturer in the Department of Civil and Environmental Engineering at Makerere University's College of Engineering, Design, Art and Technology (CEDAT), has been appointed Lead Author for Chapter 1 of the Intergovernmental Panel on Climate Change (IPCC) Seventh Assessment Report (AR7). He will contribute to Framing, Methods, and Knowledge Sources under Working Group I: The Physical Science Basis.

Dr. Mugume joins a distinguished team of 664 experts from 111 countries selected as

Coordinating Lead Authors, Lead Authors, and Review Editors. The appointments followed a competitive global nomination process involving 3,771 candidates, underscoring the IPCC's commitment to scientific excellence and diversity.

Established in 1988 by the United Nations Environment Programme (UNEP) and the World Meteorological Organization (WMO), the IPCC is the UN's principal body for assessing climate science. Its periodic reports form the foundation for global climate policy, adaptation strategies, and mitigation efforts.

The Seventh Assessment Report will provide a comprehensive scientific basis for international decision-making on climate change. Work on AR7 begins later this year, with the first Lead Author meeting scheduled for December 2025. The full assessment cycle is expected to conclude in 2029.

Dr. Mugume's appointment positions Makerere University and Uganda at the forefront of global climate science, contributing to knowledge that will shape policies and responses to one of the most pressing challenges of the century.

5.22 Winning Students of the UETCL - CEDAT Innovation Challenge awarded



A spirit of innovation filled the Protea Hotel Kampala by Marriott on August 15, 2025, as Makerere University engineering students showcased groundbreaking solutions for Uganda's electricity transmission sector. The highlight was the crowning of Patrick Benjamin Makanga and Florence Konga Simon as winners of the UETCL-CEDAT Post Research Innovation Challenge for their project, An IoT System to Curb Vandalism on Transmission Networks.

The competition was judged by experts from Makerere University's College of Engineering, Design, Art and Technology (CEDAT), Uganda Electricity Transmission Company Limited (UETCL), and the Ministry of Energy and Mineral Development. Their deliberations underscored the depth of research and creativity presented by the finalists.

The challenge was born out of a 2022 Memorandum of Understanding between CEDAT and UETCL, aimed at bridging academia and industry. Over three years, students tackled real-world problems, producing eight major projects. Seven were presented at the final event, alongside two bonus studies.

Among the standout presentations were:

- A smart system to mitigate frequency instability from large-scale solar PV integration.
- Reliability-centered maintenance strategies to enhance grid performance.
- Protection coordination for grids with increasing renewable penetration.
- Digital substation design for Lugogo.
- Concrete monopole super-structure design for the Owen Falls–Lugogo line.
- Transmission losses reduction models.

Makanga and Simon's IoT solution won the UGX 2 million grand prize, directly addressing vandalism, a costly challenge for UETCL. First runner-up honors went to Ndagire Janat Mugalu and Matsiko Ernest for their concrete monopole design, while Yashaba Cynthia and Kabi Jenkins Joel secured second runner-up with their transmission losses reduction model.

Organizers emphasized that the initiative demonstrates how student-led innovation can drive solutions to national energy challenges, positioning Makerere University as a hub for applied engineering research and industry collaboration.

5.23 OSHE Project Team Strengthens Safety Collaboration with NWSC Ggaba Plant



On August 8, 2025, the Occupational Safety, Health, and Environment (OSHE) project team visited the National Water and Sewerage Corporation (NWSC) Ggaba water plant in their third industry stakeholder engagement. The initiative, a collaboration between Makerere University, Busitema University, and Kyambogo University with support from the UK's Royal Academy of Engineering, aims to foster a robust safety culture across Uganda's key sectors.

Led by Dr. Abubaker Matovu Waswa, Head of Electrical and Computer Engineering at Makerere University's College of Engineering, Design, Art and Technology (CEDAT), the delegation was received by NWSC officials including Plant Operations Manager Thomas Mukwana and the Principal Human Resource Officer. NWSC outlined its existing safety measures, which include an active OSHE committee, quarterly internal audits, daily toolbox talks, a penalty card system for PPE compliance, and a comprehensive OSHE manual.

The OSHE team commended these efforts and recommended further enhancements such as embedding safety as a core operational value, increasing audit frequency with external reviews, introducing "safety moments" at meetings, and extending safety awareness beyond the workplace into homes and communities.

Following discussions, the team toured Ggaba 1, 2, and 3 plants, inspecting water pumps, chemical rooms, and other critical areas while conducting a brief safety audit. The visit concluded with mutual appreciation, highlighting NWSC's openness to continuous improvement and the project's mission to bridge academia and industry in advancing occupational safety and health.

This collaboration marks another step toward building safer, healthier workplaces across Uganda, reinforcing the role of universities in shaping national safety standards and practices.

5.24 The Pre-Conference Workshop on Equitable Land Governance



The Department of Geomatics and Land Management convened a three-day Pre-Conference workshop from July 28–30, 2025, at Fairway Hotel, Kampala, ahead of the regional scientific conference at Kabira Country Club. The workshop focused on advancing equitable land administration and sustainable practices across Eastern Africa, drawing scholars, policymakers, and cultural leaders committed to strengthening land governance as a driver of socio-economic transformation.

Vice Chancellor Prof. Barnabas Nawangwe officiated the closing ceremony, stressing that land remains “not just a factor of production, but a source of life.” He highlighted

Uganda's growing land pressures, citing disputes in Kawempe as emblematic of wider challenges including speculative land grabbing, mineral exploitation, and unplanned urban expansion.

Sessions addressed gender equality in land registration, integration of communities into the National Land Information System, and innovative planning for refugee-hosting districts and rapidly urbanizing centers. Dr. Brian Makabayi emphasized affordable mapping tools for inclusive decision-making, while Department Head Dr. Lydia Kayondo Ndandiko Mazzi showcased training in UAV and GNSS technologies to build national technical capacity.

Prof. Moses Musinguzi, Principal CEDAT praised the Vice Chancellor's presence as a sign of institutional resolve and acknowledged the role of development partners. The workshop formed part of the Advances in Geomatics Research series and aligned with the 14th Eastern African Land Administration Network (EALAN) summit, reinforcing collaboration among 12 regional universities and European counterparts.

5.25 Strengthening Campus Safety through Safeguarding Awareness at CEDAT



The Safeguarding Awareness session held at CEDAT on October 3rd, 2025 successfully strengthened the safety culture within Makerere University by equipping staff and students with practical knowledge and strategies to prevent harm. Facilitated by student

Champion Atim Mary Agnes from the Margaret Trowel School of Industrial and Fine Art, the session attracted a large number of students and emphasized the importance of building a safe, supportive, and informed campus community. Participants were introduced to the concept of safeguarding, with clear guidance on identifying risks and understanding the roles of survivors, alleged offenders, whistleblowers, and third-party witnesses in the safeguarding process.

The session highlighted key outputs, including the training of fifty staff safeguarding champions and over one hundred student champions, ensuring a strong network of advocates across the University. Ms. Atim urged management to extend safeguarding efforts to student hostels, where vulnerabilities remain high, and emphasized that existing policies such as the Human Resources Policy, Student Accommodation Policy, and Teaching and Learning Policy reinforce Makerere's commitment to protection. By addressing concerns such as physical harm, emotional harm, financial harm, and neglect, the session demonstrated Makerere University's proactive approach to safeguarding and its dedication to ensuring the well-being of its community.

5.26 Workshop on Hybrid Renewable Energy Systems Advances Sustainable Electricity Access in Uganda



A section of the participants at the workshop

The College of Engineering, Design, Art and Technology (CEDAT) hosted a hands-on workshop on hybrid renewable energy systems from February 22 to 26, 2025, under the Promotion of Hybrid Renewable Energy Systems towards Electricity Access in Uganda (PHRE) initiative. The event brought together experts, facilitators, and participants to explore practical solutions for expanding electricity access through sustainable technologies. The workshop opened with an introductory session led by Dr. Rafat Al Afif, who emphasized strategies to enhance biogas production and improve the efficiency of hybrid systems. Participants examined critical components such as charge controllers and their role in optimizing energy performance.

A major highlight was a field visit to the Kyampisi Microgrid in Luweero District, where a 10KW system powers essential services including an energy kiosk, briquette-making machines, and a water pump. The visit demonstrated the transformative potential of renewable energy in off-grid communities. Practical sessions, facilitated by Florian, spanned three days and engaged participants in tasks such as current switching with MOSFETs, voltage and current measurement, and building a battery charge controller. These exercises equipped attendees with technical skills to design and implement hybrid energy solutions tailored to Uganda's needs.

5.27 Emerging Innovations from Makerere University Students Shine in Cadence Program



Makerere University students are making waves with groundbreaking projects under the 2025 Cadence Program, which aims to foster innovation, sustainability, and practical solutions to everyday challenges. The program's mentorship, funding, and technical guidance have propelled a range of initiatives that promise to revolutionize various sectors.

MOTOFIX Asiimire Patricia (College of Computing and Information Sciences) is developing MOTOFIX, inspired by the delays caused by long-distance trucks along East Africa's major trade routes. Currently in the development stage, this project focuses on streamlining traffic flow across crucial border roads like the Northern Corridor, with plans to extend its impact regionally.

AI-Enhanced Waste-to-Energy Recycling System Motivated by waste management challenges, Segane Stuart (College of Computing and Information Sciences) is working on a system powered by AI robotics to classify and process waste into renewable energy. This prototype is a response to the Kitezi landfill tragedy and aims to refine energy solutions and implement blockchain for waste tracking.

AI-Driven Predictive Power Management System Michael Tumuhaise and Heli Prajapati (College of Computing and Information Sciences) are in the final stages of developing a system that utilizes AI and IoT to optimize electricity usage, aiming to prevent power outages in Uganda's prepaid system. The project seeks to enhance real-time data accuracy and expand its user base.

ECOFRIEND Ainebyoona Oscar (College of Engineering, Design, Art, and Technology) is testing ECOFRIEND, a mobile app for effective waste management. With financial and mentorship support, the project aims to integrate revenue models and expand into institutional waste management.

Solar Still with Photovoltaic System for Water Purification Kihika Kyomuhendo and Mukasi Mark are fine-tuning a solar-powered water purification system that addresses waterborne diseases in rural Uganda. Their project, which uses MATLAB simulations, aims to provide clean water sustainably without energy-intensive methods like boiling.

ML-Powered Irrigation System for Agriculture Amwine Nickson and Kakeeto Francis (Creavins, College of Engineering, Design, Art, and Technology) have developed an AI-driven irrigation system to address high water and labor costs for farmers. Rapid prototyping is underway, with plans to test in the field and iterate based on farmer feedback.

Recycled Paper Phone Case (Ecophone) Atuhair Trevor Wamara is leading a project that transforms recycled paper into biodegradable phone cases as eco-friendly alternatives to plastic. Currently in durability testing, the team plans to expand into other sustainable accessories.

Water-Powered Pumping Machine Blessed Antangaize Baguma (College of Engineering, Design, Art, and Technology) is addressing water shortages in rural areas with a hydraulic-powered pump that works without electricity. Prototype testing is ongoing, with plans for community expansion and smart monitoring integration.

AgroPlus – AI-Powered Agricultural Monitoring Ijoot Anthony is refining AgroPlus, which leverages AI and IoT to optimize irrigation, fertilization, and pest control in agriculture. Real-world testing is underway, with hopes for partnerships in the agricultural sector.

Remote Monitoring System for EV Chargers Anyole Jared and Besigye Mukama are designing an IoT-based system to enhance efficiency and safety in monitoring EV charger performance. The prototype is being refined for wider deployment.

PhoenixLearn Derrick Samuel Gyoga is prototyping an AI-driven e-learning platform that personalizes study experiences and equips teachers with performance analytics. The project aims to expand accessibility and integrate multilingual support.

Sortify Muyama Monica (College of Computing and Information Sciences) is working on a smart waste management system that streamlines sorting and recycling. Her prototype is being refined for community and business pilots, with future plans to integrate blockchain for incentives.

The Smart Water Management System Mbabazi Angel has developed a water management system using sensors and AI for real-time monitoring. In its final testing phase, the project aims to partner with the National Water and Sewerage Corporation for widespread adoption.

These innovative projects underscore Makerere University's pivotal role in addressing local and global challenges through technology and sustainability, paving the way for a brighter future.

5.28 CEDAT Open Day 2025 Showcases Green Skills and Student Innovation



CEDAT successfully hosted its **2025 Open Day and Exhibition** on March 13–14, bringing together students, industry leaders, and policymakers to champion sustainability and innovation. Organized by the Makerere Engineering Students Association (MES), the event aligned with the **Sustainable Development Goals (SDGs)** and emphasized the importance of green skills in shaping Uganda's future workforce. The exhibition provided a platform for students to showcase groundbreaking projects, connect with professionals, and explore opportunities in the evolving green economy. Interactive workshops and panel discussions fueled innovation and inspired actionable solutions to environmental challenges. Stakeholders including **Sogea Satom, ATC Uganda, Cadence Design Systems, UIPE, and UETCL** participated, offering internships, training, and mentorship opportunities.

Prof. Moses Musinguzi, Principal of CEDAT, urged students to join professional associations such as the Uganda Institution of Professional Engineers (UIPE), stressing their role in career development and certification. He also emphasized the need for innovation and analytical thinking to enhance global competitiveness. Other speakers included **Eng. Henry Mpuuga**, Vice President of UIPE, who encouraged students to commercialize their innovations, and **Assoc. Prof. Dorothy Okello**, Dean of the School of Engineering, who called for projects to move beyond academic exercises into market-ready solutions.

Student innovations under the **2025 Cadence Program** ranged from AI-driven waste-to-energy systems and predictive power management to eco-friendly phone cases and smart irrigation solutions. These projects demonstrated the creativity and potential of Uganda's young engineers in addressing sustainability challenges. The Open Day

reinforced CEDAT's role as a hub for innovation, collaboration, and professional development, advancing Uganda's vision for a greener, more sustainable future.

5.29 Employability Hub Strategic Engagement



The Employability Hub at CEDAT advanced significantly through a strategic engagement held on November 6, 2025. Hosted by the School of Engineering, the session brought together CADENA, contracted under the UNESCO-CFIT III project, faculty, and industry partners to align academic training with labour market needs. The hub is envisioned as a gateway to equip students with career skills, entrepreneurial readiness, and confidence to transition into the workforce. Building on recent curriculum reforms, the initiative links competency-based education (CBE) with industry-defined competencies. CADENA has already conducted a curriculum review, delivered CBE training for faculty, and facilitated a career workshop for students and staff.

Dr. Donna Namujju welcomed the CADENA delegation led by Mr. Peter Merckx, joined by Mr. Klavs Christensen and Prof. Marco Turco. Industry partners included Lwera Electronics and Semiconductors, the Stanbic Bank Incubator, and China Communications Construction Company. Mr. Merckx outlined CADENA's regional methodology, Mr. Christensen shared curriculum evaluation findings, and Prof. Turco introduced CADENA's toolkit for establishing the hub.

Key recommendations emphasized integrating employability programming into curricula, adopting Gen Z-friendly pedagogies, and strengthening ties with industry. Makerere and CADENA will now collaborate to operationalise the toolkit through phased interventions, employer advisory roles, and expanded partnerships to enhance student placement and entrepreneurship opportunities.

5.30 Nurturing Young Minds – Design Thinking in the MES Incubation Program



Nurturing young minds through innovation was at the heart of the MES Incubation Program's Design Thinking workshop held on September 3, 2025, at CEDAT. Facilitated by Mr. Collins Mugadya, Programs and Mentorship Officer at the Makerere Innovation and Incubation Center (MIIC), the session marked a pivotal stage in the incubation journey, shifting focus from problem identification to solution design.

With empathy as the foundation, students were encouraged to view challenges through the lens of those directly affected, fostering deeper understanding before crafting solutions. "Very great innovation begins with empathy, understanding the problem before building the solution," Mr. Mugadya emphasized, setting the tone for a day of creative exploration.

Key outcomes included identifying real-world pain points, brainstorming human-centered solutions, and refining ideas through iteration and feedback. The workshop blended theory with practice, equipping students with practical tools for impactful innovation.

MIIC's commitment to nurturing Uganda's next generation of change makers was evident throughout the session. Mr. Mugadya's mentorship was praised for making complex concepts accessible and actionable. Students left energized, carrying prototypes and ideas with potential to evolve into viable ventures, guided by empathy, creativity, and iteration as core principles of innovation.

5.31 Bridging Academic Learning with Career Readiness

Bridging academic learning with career readiness and preparing graduates for the evolving job market was the focus of a pivotal workshop held on November 7, 2025, at CEDAT. Supported by the UNESCO-CFIT project, the event brought together final-year engineering students, faculty, and industry leaders to explore practical strategies for employability. The workshop also celebrated student excellence, recognizing Amaaso Eliana as the top-performing feM student, while Ayebale Magezi Isaac and Nkamba Emanuel shared the award for best M students.

Dr. Winfred Kabumbuli, Dean of Students, announced the approval of a Career Mentorship Policy by the University Council, describing it as a milestone in strengthening career guidance. She emphasized adaptability, resilience, and lifelong learning as essential attributes for success in a rapidly changing world shaped by technology and globalization.

Industry perspectives enriched the dialogue, with Peter Sabiiti Nzambanita of NEXUS Plus Africa highlighting community-driven engineering education, and Assoc. Prof. Dorothy Okello, Dean of the School of Engineering, unveiling plans for an Employment Hub and Career Clinics. A distinguished panel featuring leaders from Kira Motors, UIPE, and the construction sector shared insights on perseverance and continuous learning.

5.32 Engineering Students Gain Hands-On Insights at



Lugogo Substation

Fourth-year Electrical engineering students from Makerere University's College of Engineering, Design, Art and Technology (CEDAT) stepped out of the lecture hall and into the field for an immersive site visit to the Uganda Electricity Transmission Company Limited (UETCL) Lugogo Substation. The visit, organized under the UNESCO-CFIT III Industry Guest Lecture Series, offered students a rare opportunity to connect classroom theory with real-world practice. Guided by UETCL engineers, the students toured the substation, observed its operations, and learned about safety protocols, maintenance procedures, and the complexities of managing reliable power transmission.

Dr. Donna Namujju, who coordinates the Industry Guest Lecture Series, noted that such engagements are vital in bridging academic learning with workplace readiness. "Exposure to industry practice equips our students with confidence and practical insights that cannot be gained from textbooks alone," she said. Students expressed excitement at seeing how concepts in power systems, protection, and grid stability are applied in Uganda's electricity infrastructure. The School of Engineering emphasized its gratitude to UETCL and UNESCO-CFIT III for supporting the initiative, reaffirming its commitment to strengthening partnerships that prepare graduates for the evolving energy sector.

5.33 Engineering Students Benefit from the EACOP-

CPP Scholarships

On **5th September 2025**, the East African Crude Oil Pipeline (EACOP) and China



Petroleum Pipeline (CPP), in partnership with Makerere and Kyambogo University, launched a scholarship program at the Kampala Sheraton Hotel. Through this initiative, **28 academically gifted but financially disadvantaged undergraduates** were awarded full scholarships. Notably, **10 recipients are students of the College of Engineering, Design, Art and Technology (CEDAT).**

The scholarships, established under a Memorandum of Understanding between EACOP, CPP, and the two universities, reflect a shared commitment to corporate social responsibility, community development, and investment in Uganda's future engineers. Selection required a minimum of Second Class Upper division standing, ensuring that awardees represent both academic excellence and resilience.

CEDAT's 10 Outstanding Scholars

- Angella Nakawuka – Mechanical Engineering
- Edith Atuheire – Electrical Engineering
- Esther Nekesa Nakawuka – Mechanical Engineering
- Gatsinzi Benon – Electrical Engineering
- Joseph Chandin – Mechanical Engineering
- Muhumuza Tusabe – Civil Engineering
- Radai Oleja Epiu – Electrical Engineering

- Reagan Edgar Ssekandi – Electrical Engineering
- Rogers Samula – Mechanical Engineering
- Shirat Namatovu – Mechanical Engineering

Ms. Esther Nekesa Nakawuka, speaking on behalf of CEDAT scholars, expressed gratitude and pledged to use the scholarship to achieve academic goals and give back to society.

5.34 Smart Villages and Makerere University Strengthen Collaboration on Solar-Powered Development

From 13th to 15th November 2025, Zoe Slattery, Senior Technical Lead with Smart Villages, was hosted by Makerere University School of Engineering to tour solar-powered



agricultural processing and internet access points in Apac. The sites are part of the NASA-Harvest and RCBN (Rural Connectivity Backbone Network) projects under netLabs!UG.

The visit followed an earlier meeting on 4th November between Smart Villages representatives and Prof. Dorothy Okello, Dean of the School of Engineering, where both parties expressed a shared interest in sustainable energy and agricultural development. Smart Villages focuses on solar energy as a catalyst for agricultural growth, while the RCBN project provides free, solar-powered internet to remote communities for education, healthcare, and farming.

During the Apac tour, several opportunities for collaboration were identified. The Bedigen Farmer Group emerged as the strongest candidate for solar-powered agricultural processing, particularly for maize, soybean, and sunflower. At the Atopi Trading Center RCBN Hotspot, internet connectivity was down due to a powered-off repeater, but the community continued to use the solar system for phone charging, underscoring the demand for broader off-grid energy services. At Atopi Primary School, internet access was disrupted after the router charger was taken, highlighting the need for more secure and robust solar installations. Meanwhile, the Radio Apac Station requested additional solar panels to ensure backup power for equipment, making it a strong candidate for scaling up solar energy to support reliable communication. The tour confirmed strong alignment between Smart Villages and Makerere University School of Engineering in harnessing solar energy to unlock agricultural productivity, improve connectivity, and strengthen community development.

5.35 The Annual Architecture Photo, 2025

As a newly established department within CEDAT, the Architecture Department marked its growth and identity with the annual group photo, an enduring tradition that brings



together students from first to fifth year in a vibrant celebration of unity and creative ambition. Captured on the iconic steps of CEDAT, the photo reflects the evolving journey of aspiring architects from foundational sketches to visionary final-year projects. Faculty members stood proudly alongside students, celebrating the energy, talent, and dedication

that define the department.

More than a photograph, the moment served as a collective reflection, an opportunity to honor progress made and envision the possibilities ahead. With Kampala's skyline as their canvas, Makerere's architecture students continue to shape the future of design and urban transformation. This year's photo carries added significance, marking the department's full-fledged status under the leadership of Arch. Dr. Kenneth Ssemwogerere, a milestone that signals growth, leadership, and a renewed commitment to architectural excellence.

5.36 “From Design to Delivery”: Uganda Clays MD Inspires Makerere Engineering Students

The School of Engineering at Makerere University hosted Mr. Reuben Tumwebaze,



Managing Director of Uganda Clays Ltd and a proud alumnus of Mechanical Engineering, for a high-impact lecture under the UNESCO-CFIT III Industry Guest Lecture Series. The session, titled “*From Design to Delivery – Career Pathways in Modern Manufacturing for Mechanical Engineers*”, offered students a rare opportunity to learn from Mr. Tumwebaze’s extensive career journey. Reflecting on his time at Makerere, he candidly admitted that he once thought mechanical engineering was “for people who want to become mechanics,” a misconception shaped by limited career guidance at the time. He contrasted this with today’s opportunities, noting the growing demand for engineers across national and international companies.

Tracing his career from a cement factory to roles at Hima Cement, Coca-Cola, Uganda

Christian University, and UNRA, Mr. Tumwebaze highlighted the versatility of engineering training. A pivotal moment was his pursuit of an ACCA qualification, which broadened his business acumen and strengthened his leadership trajectory. He urged students to be proactive, gain broad experience before specializing, and embrace lifelong learning. “Knowledge is power,” he emphasized, encouraging students to read widely and apply their skills creatively across sectors.

5.37 Students urged to Emphasize Empathy, Adaptability, and Industry Readiness

On September 3, 2025, engineering students in the MES Incubation Program at



Makerere University participated in a Design Thinking workshop at CEDAT, marking a critical milestone in their innovation journey. The session, facilitated by the Makerere Innovation and Incubation Center (MIIC), shifted focus from problem identification to solution design, with empathy placed at the core of the process. Students were challenged to view problems through the lens of those affected, identify pain points, and brainstorm human-centered solutions. The hands-on approach blended theory with practice, equipping participants with tools to refine ideas into prototypes that could evolve into viable ventures.

Complementing this, Prof. Marco Turco led a training session that underscored the importance of adaptability, soft skills, and holistic intelligence in bridging the gap between academia and industry. He emphasized that employers increasingly value generalists with versatile skill sets, workplace experience, and the ability to adapt to evolving industry

demands. Conventional six-week internships, he cautioned, are often inadequate, urging students to pursue micro-skills and continuous exposure to real-world environments.

The workshop also highlighted professional networking as a critical skill, encouraging students to engage industry representatives with clarity and purpose. Prof. Turco stressed that impactful networking often occurs in brief exchanges, requiring concise and meaningful communication. Holistic intelligence, encompassing cognitive, emotional, linguistic, and social dimensions, was identified as essential for navigating workplace dynamics. Mental health and well-being were also emphasized as vital to professional success, with participants reminded that resilience and happiness directly influence performance.

Interactive activities such as Student Journey Mapping and Passion over Profit exercises reinforced the importance of reflection, creativity, and impact-driven innovation. Together, the sessions positioned empathy, adaptability, and industry readiness as guiding principles for Makerere's next generation of innovators.



Prof. Turco reading out the careers participants wrote down for everyone to guess who wrote it

5.38 Makerere Final Year Engineering Students Gain Career Insights at the employability Engagement



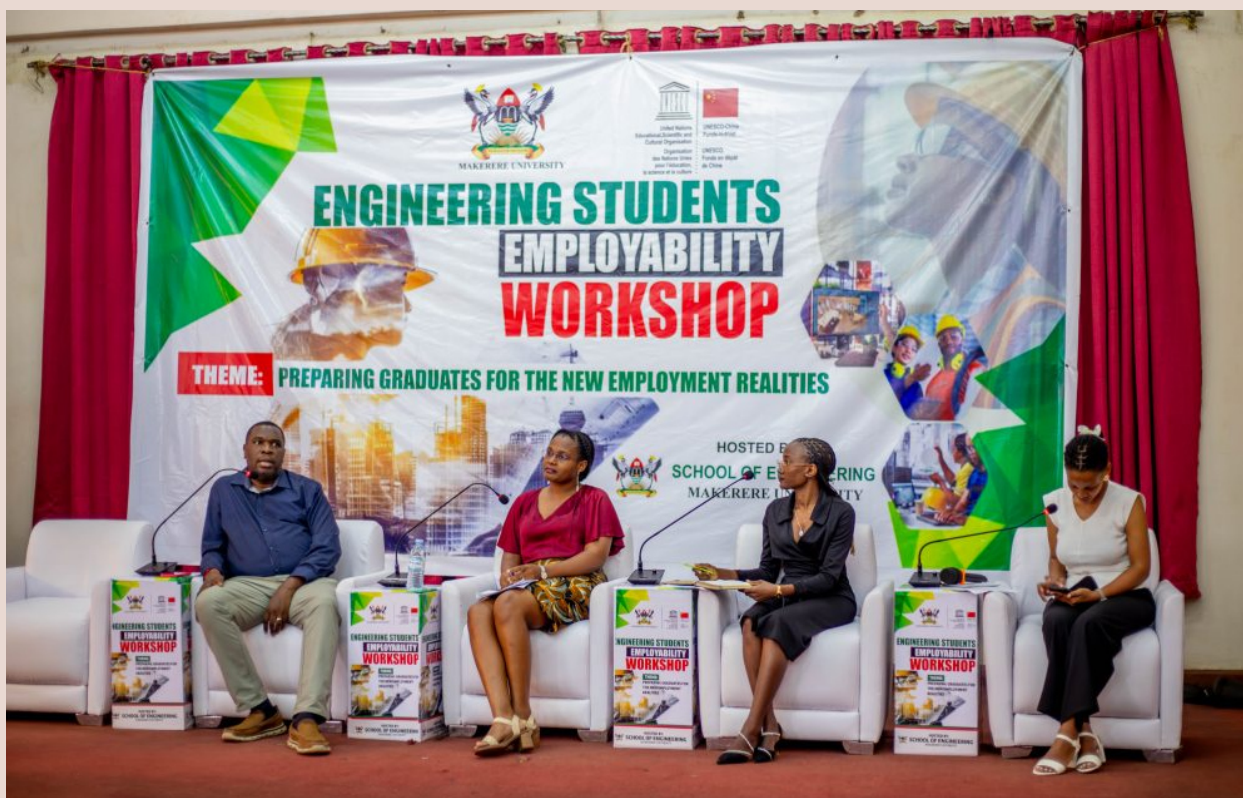
Ms. Amaaso Eliana (2nd Right) was recognized as the top-performing female student, while Ayebale Magezi Isaac and Nkamba Emanuel shared the award for best Male.

Final year engineering students converged at CEDAT on November 7th, 2025, participated in a workshop aimed at enhancing student employability and preparing graduates for the evolving job market. The event, focused on strategies to bridge academic learning with career readiness. The event also featured a special recognition ceremony honoring outstanding final-year engineering students celebrating excellence, innovation, and leadership. **Amaaso Eliana** was recognized as the top-performing feM student, while **Ayebale Magezi Isaac** and **Nkamba Emanuel** shared the award for best M students, having tied in distinction.

Dr. Winfred Kabumbuli, the Dean of Students at Makerere University, in her remarks at the opening of the workshop on preparing graduates for the new employment realities, announced the recent approval of a **Career Mentorship Policy** by the University Council. She described the policy as a major step toward strengthening career guidance for students. Kabumbuli noted that the workshop was timely, addressing the challenges graduates face in a rapidly evolving job market shaped by **technology**, **artificial intelligence**, and **globalization**.

“The question is no longer what job to get, but what value you can create and how adaptable you are to change,” remarked Dr. Winfred Kabumbuli, Dean of Students at

Makerere University. She emphasized that while earning a degree is a significant milestone, it is **attitude, curiosity, and resilience** that truly shape long-term success. Dr. Kabumbuli encouraged students to embrace **lifelong learning**, take on unfamiliar challenges, and recognize that career paths are rarely linear, noting that many successful individuals found their way through unexpected turns. She commended alumni and industry partners for their continued mentorship and support, reminding students that **education does not end at graduation**, but continues through experience, guidance, and a willingness to evolve.



Peter Sabiiti Nzambanita, speaking on behalf of **NEXUS Plus Africa**, highlighted the organization's mission to transform engineering education by encouraging students to learn, listen, and collaborate closely with communities. He emphasized the significance of the employability workshop, noting its alignment with their umbrella network, **Engineers without Borders**, which connects students to professionals and fosters mentorship. "We envision engineers, professionals, and communities working together for the greater good, especially in critical sectors such as water, energy, and infrastructure," he said. Nzambanita also remarked that as the world continues to evolve, so too must engineering, adapting to emerging technologies and the growing needs of society. He said their program connects students to mentors, communities, and hence creates an opportunity for young people to go to the communities to do engineering with the heart and purpose, building on what the communities know, thereby generating community masterplans, and get involved in the implementation of the plans, also allowing the students to innovate from real-life experiences.

5.39 Makerere University Hosts CADENA Team for Curriculum Reform and Employability Hub Launch



The School of Engineering welcomed a delegation from CADENA under the UNESCO-CFIT III initiative for a high-impact workshop focused on curriculum reform, competency-based education, and student employability. The event marked a significant step toward establishing an on-campus Employability Hub aimed at bridging the gap between academic learning and workplace readiness.

The visiting team included Mr. Peter Merckx, CADENA team lead; Mr. Klavs Christensen, curriculum specialist; and Prof. Marco Turco, toolkit developer. They were joined by industry leaders such as Karugaba Ivan, CEO of Lwera Electronics & Semiconductors, and representatives from Stanbic Business Incubator and CCCC Highway Consultants CO., Ltd.

Mr. Merckx outlined CADENA's cross-country initiatives and its practical approach to capacity building in universities. Mr. Christensen shared insights from a recent curriculum review, stressing the need for industry-led conversations around graduate skills. Prof. Turco introduced a low-cost, high-impact toolkit designed to help universities launch Employability Hubs that enhance students' technical and soft skills.

Key themes from the workshop included:

- Embedding employability into classroom activities through small, scalable steps.
- Co-designing learning outcomes with industry partners.
- Engaging the informal sector, which employs a significant share of graduates.
- Adapting teaching strategies to better align with Gen Z learners.

The School of Engineering expressed gratitude to CADENA, UNESCO-CFIT III, and all participating partners for their commitment to student success. The next phase will involve piloting the Employability Hub toolkit and strengthening collaborations with employers to ensure graduates are well-prepared for the job market.

5.40 The Research Information Management System rolled out at CEDAT



Dr. Kikooma Julius (R), Director of the Directorate of Graduate Training, and Assoc. Prof. Kizito Maria Kasule, Deputy Principal of CEDAT, at the RIMS rollout event at CEDAT, Makerere University on June 12, 2025.

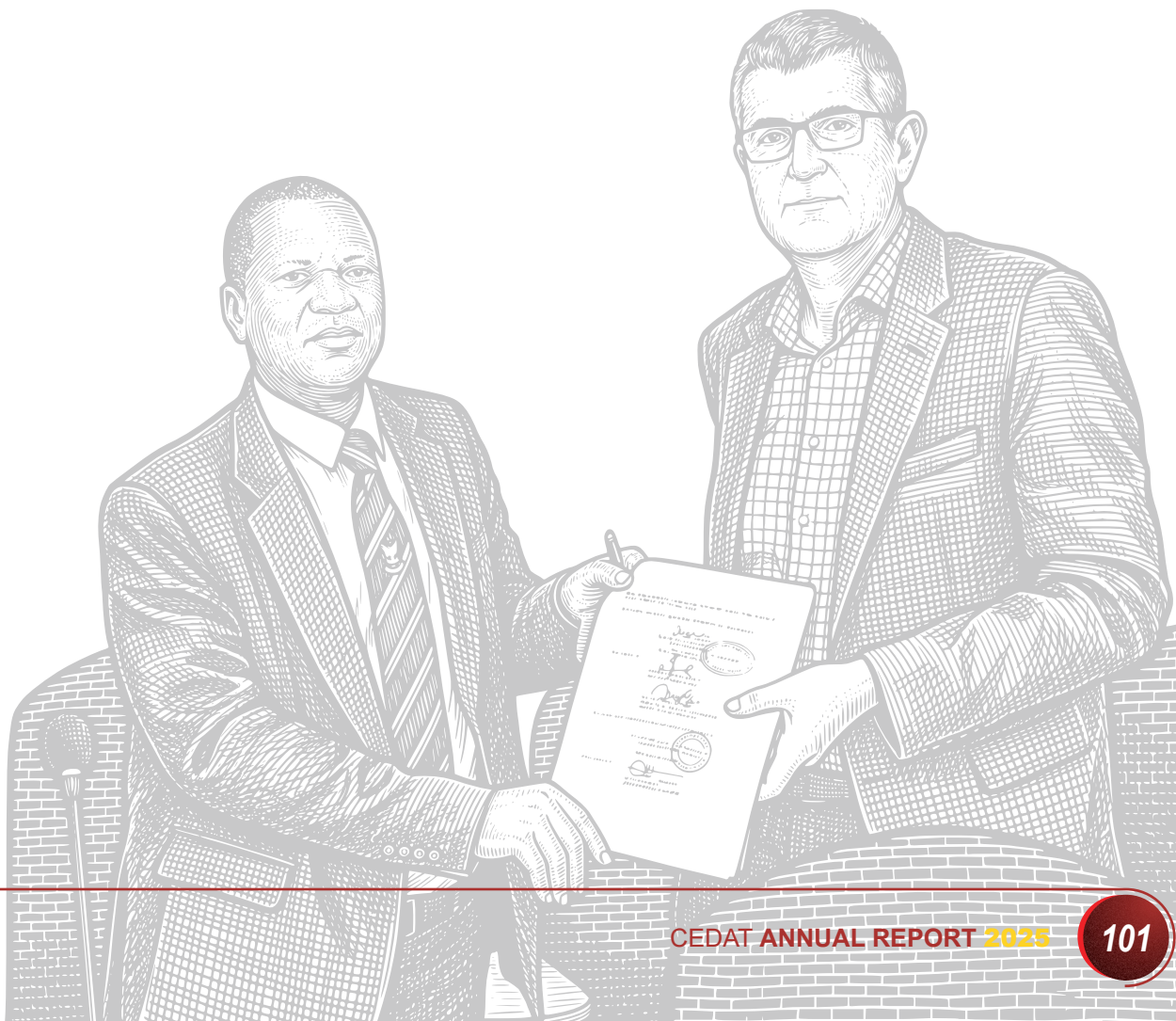
Makerere University launched RIMS at the College of Engineering, Design, Art and Technology (CEDAT), marking a major milestone in its digital transformation agenda. The system, developed by the Directorate for ICT Support (DICTS), is designed to centralize and streamline graduate training and research processes by tracking admissions, student progress, and research activities. During the rollout on June 12, 2025, officials emphasized that RIMS will address persistent challenges such as difficulties in accounting for admitted students and delays in research completion. By integrating with the existing Academic Management Information System (ACMIS), RIMS ensures efficient

record-keeping and compliance with policies outlined in the Graduate School Handbook.

The Directorate of Graduate Training outlined plans to increase graduate student enrollment from 19 percent to 30 percent by 2030, aligning with Makerere's broader vision of becoming a research-led institution. A significant change in PhD admissions this year introduced a cohort-based approach, with 552 students admitted in two groups. RIMS is expected to improve monitoring of these cohorts, ensuring timely progress and graduation.

Despite the advancements, challenges remain. Staff shortages mean some supervisors are handling more than eight graduate students, creating heavy workloads. Limited funding for graduate students was also flagged as a growing concern, with calls for top university management to address facilitation gaps.

Officials stressed that digital solutions like RIMS are critical in bridging these gaps. By providing real-time updates on student progress, the system will help identify delays early and ensure smoother graduation processes. The rollout underscored Makerere's commitment to leveraging technology to strengthen graduate training, enhance accountability, and support its transition into a research-led institution.



5.41 CEDAT Students Win Best Young Author Award at Africa Electricity Symposium



Two students from CEDAT won the prestigious Best Young Author Award at the 2025 Africa Electricity Symposium, held at Méstil Hotel & Residences in Kampala. Reagan Kyomuhendo Muhimbo and Shem Christopher Luwandaga were recognized for their

research paper titled *“Understanding the Underutilization of Electric Pressure Cookers in Urban Uganda: Barriers, Motivators, and Policy Recommendations.”* Presented under the symposium’s sub-theme on decentralized and off-grid energy solutions, the paper examined socio-economic and behavioral factors limiting adoption of electric pressure cookers in urban households. The findings offered actionable policy recommendations to accelerate clean cooking transitions in Uganda.

Organized by the Electricity Regulatory Authority (ERA), the Africa Electricity Symposium is a premier continental platform that convenes researchers, policymakers, industry leaders, and energy enthusiasts to explore innovations in sustainable energy. This year’s theme, *“Powering Africa: Smart, Innovation, and Energy Sustainability for Growth,”* provided a backdrop for dynamic discussions and groundbreaking research presentations. The award highlighted the growing influence of CEDAT in energy research and innovation, underscoring the importance of youth-led contributions to Africa’s energy future. By addressing barriers to clean cooking technology adoption, the winning paper demonstrated how student-led research can inform policy and drive practical solutions to pressing energy challenges.

5.42 CEDAT Strategy Workshop Charts Path for Transformative Teaching, Research, and Innovation



The College of Engineering, Design, Art and Technology (CEDAT) set out clear outputs from its two-day strategy workshop held April 14–15, 2025, at Imperial Resort Beach Hotel, Entebbe. Under the theme “Advancing Education, Research, Innovation for a Transformative Future in Engineering, Design, Art and Technology,” the workshop produced actionable resolutions to strengthen teaching, research, and innovation in line with societal needs. The Acting DVC Academic Affairs Prof. Mukadasi Buyinza speaking on behalf of the Vice Chancellor Prof. Nawangwe, urged CEDAT to align with Makerere University’s University 5.0 concept. Outputs from the workshop included commitments to integrate advanced technologies such as artificial intelligence into curricula, adopt human-centered approaches, and prioritize green technologies and entrepreneurship.

Prof. Moses Musinguzi, Principal of CEDAT, emphasized alumni engagement as a key output, calling for stronger connections to leverage mentorship, career guidance, and industry partnerships. He also highlighted the need for memorable student experiences to foster pride and long-term support for the college.

Participants conducted a SWOT analysis, identifying strengths such as state-of-the-art laboratories and strong professional partnerships. Weaknesses included inadequate infrastructure and limited scholarships. Outputs from this analysis included plans to modernize curricula, expand specialized equipment for graduate studies, and strengthen funding streams.



Key resolutions included:

- Involving students in university outreach programs such as infrastructure maintenance and installations to enhance hands-on experience.
- Expanding industrial placements, mentorship initiatives, and graduate fellowships to bridge academia and industry.
- Promoting product-based teaching approaches and commercialization of research outputs.
- Developing a museum and expanding art and design technologies under the “Buy Uganda, Build Uganda” initiative.

The workshop reaffirmed CEDAT’s role as a driver of innovation and socio-economic transformation, with outputs focused on producing graduates equipped to meet Uganda’s evolving development needs.





06

HUMAN RESOURCES

HUMAN RESOURCES

6.1 Research Team Honored for Sustainable Construction Breakthrough

A team of researchers were recognized by the Journal of Bioresources and Bioproducts for their outstanding contribution to sustainable building materials. The award, presented in July 2025, celebrates their paper titled "Experimental evaluation of rice husk ash for applications in geopolymer mortars. The study, authored by Ogwang G., Olupot P.W., Kasedde H., Menya E., Storz H., and Kiros Y., explores the potential of rice husk ash, a common agricultural byproduct as a key ingredient in geopolymer mortars. Their findings highlight its promise in reducing reliance on traditional cement, offering a more eco-friendly alternative for the construction industry. This recognition underscores the growing importance of bio-based innovations in addressing environmental challenges and advancing green infrastructure.

6.2 CEDAT Dean Appointed Chairperson of Uganda Vocational and Technical Assessment Board



The College of Engineering, Design, Art and Technology (CEDAT) proudly announced the appointment of Associate Professor Dorothy Okello, Dean of the School of Engineering, as Chairperson of the Uganda Vocational and Technical Assessment Board (UVTAB). Prof. Okello, the Dean of the School of Engineering at CEDAT, brought extensive experience in engineering education, skills development, and vocational training. Her appointment marked a pivotal moment in strengthening the connection between vocational education and university-level training in Uganda.

Her leadership at UVTAB was expected to enhance technical and vocational education in alignment with national development goals. Prof. Moses Musinguzi, Principal of CEDAT, expressed confidence that Prof. Okello's expertise would contribute significantly to advancing Uganda's technical education sector. The CEDAT community and colleagues nationwide extended their heartfelt congratulations to Prof. Okello on this prestigious achievement, recognizing it as a milestone that underscored the College's commitment to innovation, leadership, and transformative education.



6.3 CEDAT Celebrated Retiring Staff in End-of-Year Farewell Luncheon

Honoring our retiring staff with a cake-cutting ceremony alongside the Principal and Deputy Principal, CEDAT

CEDAT closed the year 2025 with a special luncheon that honored retiring staff members. The event recognized academic, administrative, and support staff for their dedicated contributions to the College and the University's mission. Prof. Moses Musinguzi, Principal of CEDAT, explained that while end-of-year parties and Christmas hampers had traditionally been the norm, the College had combined hampers with retirement recognition. He emphasized that proper farewells strengthened alumni relations and praised support staff for their unseen but vital contributions.

Representing the Chief Human Resource Officer, Ms. Janet Nabukeera commended CEDAT for valuing HR's role and highlighted the importance of systems that supported staff welfare. Deputy Principal Assoc. Prof. Kizito Maria Kasule also appreciated staff for their resilience and achievements in teaching, research, and community engagement.

Retirees shared reflections on their careers. Prof. Okidi Lating pledged continued support to engineering education, Assoc. Prof. George Kyeyune described his retirement as bittersweet after 34 years of service, Prof. Francis Xavier Ife reflected on his teaching legacy since 1988, Mr. Lubowa Paul expressed gratitude for opportunities that shaped his career, and Mr. Akaali Sowedi celebrated 30 years of service as a technician.

Also recognized were Prof. Rose Kirunira, Mr. Muhwezi Drake, and Ms. Nakyanzi Margaret in absentia. Staff and colleagues expressed heartfelt appreciation, noting that the ceremony symbolized unity, mentorship, and recognition of lifelong service. The event demonstrated CEDAT's commitment to honoring staff contributions, fostering community spirit, and celebrating the legacy of those who shaped the College's journey.

6.4 Appointment of Acting Heads of Departments at CEDAT

The Vice-Chancellor of Makerere University appointed four new Acting Heads of Departments at the College of Engineering, Design, Art and Technology (CEDAT), effective January 1, 2025. The appointments will run for a two-year period and are aimed at strengthening leadership and academic excellence within the college.

The newly appointed Acting Heads are:

- Dr. Abubaker Wasswa Matovu – Department of Computer and Communications Engineering
- Dr. Jane Namaganda – Department of Electrical and Electronics Engineering
- Dr. Kenneth Ssemwogerere – Department of Architecture
- Dr. Amin Kiggundu Tamale – Department of Urban and Regional Planning



Illustration of the CEDAT Building and summary of college activities. Pen and ink on bond paper by **Tadeo Kyambadde**, Year Two VCM student; supervised by **Mr. Egessa Dervin** (Graduate Fellow - DVCDM). Coursework, Academic Year 2025/2026 Semester I. Created October 2025.



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