

Curriculum Vitae Eng. Wangi M Godfrey

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|-------------------------------|--|
| Position Title and No. | Water & Irrigation Engineer |
| Family name | Wangi |
| First names | Godfrey Mario |
| Nationality | Uganda |
| Civil status | Married |

1. Education:

| Institution [Date from - Date to] | Degree(s) or Diploma(s) obtained: |
|--|--|
| Makerere University, Kampala (2021 - 2026) | PhD candidate in Material Science (Development of Zeolite-Based Nanocomposite Water Filters for Removal of Contaminants from Drinking Water in Uganda) |
| Makerere University, Kampala (2011-2013) | Master of Science in Engineering (Technology Innovations and Industrial Development) |
| Makerere University, Kampala (2004-2008) | Bachelors of Science in Agricultural Engineering (2004-2008), Makerere University, Second Class Hon. -Upper Division |
| Wuhan Vocational College, China (2017) | Certificate for automobile and machines maintenance |
| Masaka Secondary School (2002 – 2003) | Uganda advanced certificate of education (UACE) – PCB/M |

2. Employment record:

| Date | Positions held | Country | Summary of relevant activities |
|----------------|--|----------------|---|
| 2013 – To date | Lecturer, Busitema University, Department of Water resources Engineering | Uganda, Busia | Prepare lecture notes and teach undergraduate students. Participate in the development, administration and marking of exams and other assessments. Supervise or assist with supervision of undergraduate projects and research work. Assist in the development of learning materials, preparing schemes of work and maintaining records to monitor student |

WANGI GODFREY MARIO

| | | | |
|-------------------|--|-----------------|---|
| | | | <p>progress, achievement and attendance.</p> <p>Contribute to the development, planning and implementation of a high quality curriculum.</p> <p>Look for research funding support.</p> <p>Participate in departmental and faculty seminars aimed at sharing research outcomes and building interdisciplinary collaboration within and outside the department.</p> |
| 2015 to 2020 | <p>Managing Director/ Design Engineer, Techford Contractors and Suppliers. This is a private company offering Water Supply, Irrigation and Solar Systems</p> | East Africa | <p>Managing company operations, Water reservoirs, civil structures, irrigation systems, and piping and water supply systems. And also surveying to pick engineering data for analysis, Prepare presentations and reports.</p> <p>I have designed and supervised over 250 solar powered micro irrigation systems under Ugift Programme Supervised by Ministry of Agriculture Animal Industry and Fisheries</p> |
| Sept.2017 to 2022 | <p>Project Manager, Doshnut (U) Ltd, Private company offering Agricultural, Irrigation and Engineering services</p> | Uganda, Kampala | <p>Design of irrigation systems, Dams, Water Reservoirs, Piping systems, Drilling and construction of wells, plumbing works, Design and construction of civil structures, tank installations, farm planning, design of animal units, preparation of project reports, bidding documents,</p> |

WANGI GODFREY MARIO

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|--------------|--|--------|--|
| | | | presentations and project management. |
| 2011 to date | Design Engineer, Solar Aqua Ltd (Irrigation Project, Makerere University) The purpose of this project is to serve small scale farmers with solar irrigation systems that use the sun to pump water for agriculture. | Uganda | Develop sustainable solar systems for farmers, Supervision of project implementation. Solar water design, Solar systems design and installation, piping, develop water reservoirs, civil structures, negotiate with clients and suppliers. |

| Date | Positions held | Country | Summary of activities |
|-------------|--|-----------------------------|--|
| 2011-2012 | Design Engineer, Centre for Technology Design & Development (Organization in Makerere University), (2011-2012) | Uganda, Makerere University | Development of wind mill Designing & modelling of engineering drawings Supervision of production and construction of the mill |
| 2011-2012 | Part-time Lecturer, Gulu University, Department of Biosystems Engineering | Uganda | Preparing notes for the students, Lecturing, Carrying out tutorials, Marking and recording course work and examination results, Supervising Projects, Managing study tours, Organizing presentations, Editing study reports , Preparing and managing practical in the machine shop, Organizing study tours, Participating in putting the department's strategies |

| | | | |
|-----------|--|--------|--|
| 2013-2017 | Part-time Lecturer, Kyambogo University, Department of Mechanical & Production Engineering | Uganda | Preparing lessons, guidance and Evaluation of students |
| 2007 | Student Engineer, Uganda industrial research institute | Uganda | Engineering problem solving, drawings and designs, projects management and project presentation. Developed (with other members) a milk cooling system for small holder farmers of East Africa. |
| 2006 | Student Engineer, Steel rolling mills, Jinja. Manufactures steel products | Uganda | Working as a team, store keeping, machine maintenance, machine operations and control, electrical wiring, quality testing, controlling and fixing pumps, foundry work and supervising workers. |

3. Publications:

1. Emmanuel Menya, G. M. Wangi, F. Amanyire, B. Ebangu, (2013), Design of waste stabilization ponds for dairy processing plants in Uganda, Vol 15, cigjournal.org
2. Wangi, G.M., Olupot, P.W., Byaruhanga, J.K., Kulabako, R. A Review for Potential Applications of Zeolite-Based Nanocomposites in Removal of Heavy Metals and *Escherichia coli* from Drinking Water. *Nanotechnol Russia* 15, 686–700 (2020). <https://doi.org/10.1134/S1995078020060221>
3. Wangi, G.M., Olupot, P.W., Byaruhanga, J.K., Kulabako, R. Characterization of Natural Zeolite and Determination of its Ion-exchange Potential for Selected Metal Ions in Water. *Environ. Process.* **10**, 53 (2023). <https://doi.org/10.1007/s40710-023-00654-7>
4. Godfrey Mario Wangi^{1*}, Peter Wilberforce Olupot¹ and Robinah Kulabako². Optimization of Natural Zeolite Powder Milling Parameters to Enhance Surface Area and Improve Heavy Metal Adsorption from Water. Wangi et al. *Discover Applied Sciences* (2025) 7:1208, <https://doi.org/10.1007/s42452-025-07621-x>
5. Wangi, G.M., Olupot, P.W., Kulabako, R. Optimization of Silver Nanoparticle-Loaded Zeolite/Polyethylene Glycol Nanocomposite for Antimicrobial Activity and Methylene Blue Adsorption in Water. Manuscript to be submitted.

6. Wangi, G.M., Olupot, P.W., Kulabako, R. Exploring the efficacy of Silver-Loaded-Zeolite/PEG nanocomposite as a disinfectant for Escherichia Coli from Lake Victoria and Removal of Pb²⁺ from water. Manuscript to be submitted.

4. Computer Skills

I can effectively use a computer for the following softwares:

- Computer Aided Design (CAD) i.e SolidEdge, Autocad and Solidworks
- Microsoft office packages
- Adobe programs i.e Adobe in Design, Adobe Photoshop, Adobe illustrator, e.t.c...
- Programming languages: C++ , java, MatLab
- Many others like to use GPS

5. Achievements

Acquired a certificate for the national ordinary level mathematics contest (25th), August 2001

Acquired a certificate for the national advanced level mathematics contest (3rd), September 2003

6. Languages:

| Language | <u>Speaking</u> | <u>Reading</u> | <u>Writing</u> |
|-----------------|------------------------|-----------------------|-----------------------|
| English | Excellent | Excellent | Excellent |
| Swahili | Fair | Good | Fair |
| Chinese | Fair | Poor | Poor |
| Luganda | Excellent | Excellent | Excellent |
| French | Poor | Fair | Poor |

7 Professional Experience-see table

| Date | Location | Number of days | Associate Company and Client | Position | Description |
|----------------------|---|----------------|---|--|---|
| Sept 2017- Dec 2019 | Uganda Buyende, Bugweri, Jinja, Luuka, Mayuge, Tororo, Soroti, Namutumba, Kayunga and Wakiso | 850 | Client: Ministry of Water & Environment, Uganda Contact: Orishaba Catherine-Project Manager catherineorishaba@gmail.com 0702557761 | Team leader for Doshnut (U) Ltd for the Implementation of solar powered irrigation systems in ten districts of Eastern Uganda. | Eng. Wangi was assigned a responsibility as the team leader in the implementation of 4 billion UGX project. The purpose of this project was to plan, design and construct solar powered micro irrigation systems in ten (10) districts of Eastern Uganda. The target sites were in the following districts; Buyende, Bugweri, Jinja, Luuka, Mayuge, Tororo, Soroti, Namutumba, Kayunga and Wakiso. The facility considered construction of the Pump House, carrying out electrical installations (Solar Panels, Controls and Solar powered Pumps) and Carry out Mechanical Installations (Establishment and construction of the water source, Excavation and lying of pipes, installation of tanks and irrigation systems. Activities performed by Eng. Wangi; Supervise and also participate in the planning, design and construction of these irrigation sites, Prepare requisitions, negotiate suppliers and confirm quality of materials supplied, Prepare monthly reports and presentations to the client and Train and educate end-users on how to use irrigation systems. |
| Aug. 2018- Sept 2018 | Uganda Kagadi | 35 | Client: Turamura Farm Contact: Mr. Herbert-Farm owner turamuraherbert@yahoo.com 0782398765 | Project Manager & Contractor in the Implementation of solar powered irrigation systems in Kagadi | Eng. Wangi was contracted to implement an irrigation system on Mr. Turamura's farm. This project was funded by private sector Uganda and worth 55 million UGX. The project was implemented in Rutete village of Kagadi district. Wangi main activities were; to plan and design the system, supervise the implementation and also train the users to use and maintain the system. Systems designed consisted of pump selection, solar system, well design, piping and plumbing, installation of the tank stand and irrigation system. |

| Date | Location | Number of days | Associate Company and Client | Position | Description |
|--------------|---------------------------|----------------|---|---|--|
| 2011 to date | Uganda, Makere University | 3285 | <p>Client: Presidential Initiative, Uganda</p> <p>Contact: Prof Byaruhanga Joseph- Principal Investigator jbyaruhanga@yahoo.com 0772647364</p> | Project Supervisor/ Design Engineer for Solar Aqua (U) Ltd (Irrigation project, Makerere University). | <p>Eng. Wangi was appointed as a design Engineer and also as a supervisor of the design team. The aim of the project is to design and manufacture a low cost centrifugal pumps and solar submersible pumps for supplementary irrigation needs amongst small-scale farmers hence contributing to increased sustainable agricultural productivity and food security. The farmers will be empowered in terms of the knowledge and skills acquired through awareness campaigns and capacity building in irrigation. This will enable them acquire irrigation pumps, install and use them effectively for irrigation on their farms.</p> <p>Wangi's main activities is to design and lead the company's engineering strategy, covering engineering maintenance on site, capital projects, compliance with regulatory standards, and staff recruitment and training. I supervise engineers, scientist and technicians who do the designing of components/parts, coordinate production and quality control and the research and development of new products and procedures.</p> |
| 2015 to 2017 | Uganda, Makere University | 1095 | <p>Client: Resilient Africa Network</p> <p>Contact: Prof Byaruhanga Joseph- Principal Investigator jbyaruhanga@yahoo.com 0772647364</p> | Project Supervisor/ Design Engineer for Solar Aqua (U) Ltd (Irrigation project, Makerere University). | <p>Eng. Wangi was assigned as the team leader to implement small scale irrigation systems in different districts. Solar Aqua Ltd received funding from Resilient Africa Network 300 million UGX (USAID projects) to pilot manufactured solar water pumps with farmers in 4 districts: Kasese, Soroti, Manafa and Bududa. A total of 12 irrigation installations were implemented.</p> <p>Wangi main activities were; Survey of farmers' farms to set up irrigation systems; involves picking data, making choices for the farmer, Developing irrigation system designs; Sizing</p> |

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|-------------------------|---|---------------|--|--|--|
| | | | | | of necessary pumps, drip systems, pipe sizing, fittings, water reservoirs etc..., Irrigation installations; Piping, wiring and tank installations plus civil works and Maintenance and farm inspection of irrigation systems. |
| 2018 | Uganda, Mubende District | 10 | Client: Hon./Dr. Elioda Tumwesigye Contact: Mr. Wilson-Farm Manager 0772991882 | Project Supervisor/ Design Engineer for Solar Aqua (U) Ltd (Irrigation project, Makerere University). | Eng. Wangi was assigned a responsibility of Project manager. The purpose of this project is to implement a solar water supply for cows. The project is approximated to be 40 million Ugx. Eng. Wangi's main activities were; to plan, survey and design an affordable solar water supply for an existing water source. Implementation which consisted solar package installation, pipe installation and planning a pump house and water trough. |
| 2010 to date | Uganda, | 3000 + | Client: Atamba farm & Dr Jb farm Contact: Geoffrey Lumonko, Madam Betty-Managers at Techford Contractors & Suppliers 0705364083/0758201259 | Project Supervisor/ Design Engineer for Solar Aqua (U) Ltd (Irrigation project, Makerere University). | Eng. Wangi was assigned to design and implement numerous small irrigation and water supply projects under Techford Contractors and Suppliers Ltd. Wangi's main responsibility was; to plan, negotiate with clients, and generate reports and presentations. Use Engineering software such as Autocad and SolidEdge to generate layouts and drawings. |

UNIVERSITY PROJECTS SUPERVISED

| Academic Year | Position held | Project Supervised | Student & e-mail |
|---------------|---------------|---|---|
| 2014/2015 | Lecturer | Design and construction of a ceramic filter for on-site surface water purification: A case study of Mpanga stream in Buhweju district | Nshemerirwe Flavia nshemeflavia@gmail.com |
| 2014/2015 | Lecturer | Efficiency of rice husk as an adsorbent in removal of lead ions from industrial waste water | Kanyago Janet kanyagomiriamjanet@gmail.com |
| 2015/2016 | Lecturer | Design of slow sand water purification system for Kabrari landing site Pingire sub-county Serere district | Emaru Andrew emaruandy@gmail.com |
| 2016/2017 | Lecturer | Investigation of the efficiency of banana peels as an adsorbent of chromium in industrial waste water | Ogwal Walter Ogwal.walter@gmail.com |
| 2016/2017 | Lecturer | Design and construction of an animal drawn organic manure spreader | Assiah Joseph Joseph.assiah@gmail.com |
| 2016/2017 | Lecturer | Optimization of drilling and blasting parameters to minimize boulders: case study; Tororo cement limestone quarry | Mande Sam challybrunosam@gmail.com |
| 2017/2018 | Lecturer | Design and construction of a prototype of hybrid swing borehole pumping system | Okeny Geoffrey |
| 2017/2018 | Lecturer | Design and construction of a sewage sucker machine for blocked sewerage systems: Case study; Busitema University maniholes | Oyuku Ceasar Coyuku05@gmail.com |
| 2017/2018 | Lecturer | Design And Construction of A Mounted Stationary Bike Rope Pump. Case Study: Omagoro Village | Otim Sam Kizito samkizitootim@gmail.com |
| 2017/2018 | Lecturer | Design And Construction of A Galvanic Water Battery as a Low Cost Power Alternative for Rural Lighting | Aber Hope Mercy aberrhopemercy@gmail.com |
| 2017/2018 | Lecturer | Development and Simulation of Efficient And Economic Management Practices for Controlling Non-Point Source Pollution. Case Study: River Manafwa Catchment | Kakala Joshua kakalajoshua@gmail.com |

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|-----------|----------|--|--|
| 2017/2018 | Lecturer | Investigation of the Sustainability of the Underground Water Supply System for Busitema Sub-County using Modflow Version 2005 Software. | Butita Simon Peter butitasp25@gmail.com |
| 2018/2019 | Lecturer | Design and Construction of a Portable Household Dry Batch Composting Toilet. Case Study (Katanga Slum in Kawempe Division) | Naggita Barbarah barbarahnaggita@gmail.com |
| 2018/2019 | Lecturer | Design of Leakage Detecting System For Pvc Pipes at Wagagai Flower Farm. | Arinda Joshua joshuarinda94@gmail.com |
| 2018/2019 | Lecturer | Re-Design and Fabrication of a Motorized Ball Mill Mine Machine (Case Study: Syanyonja Artisanal Miners Alliance, Busitema Tc, Busia District) | Otim Santo otim.santo04@gmail.com |
| 2018/2019 | Lecturer | Assessment of the Influence of Geological Structures on Overall Pit Design and Operational Achievement. Case Study: Seyani Internal Quarry | <hr/> |
| 2018/2019 | Lecturer | Assessment of the Effect of Unlined Pit Latrines on Groundwater Quality in Rural Areas (Case Study: Nakaloke Town Council) | Chesang Fred fredchesang1994@gmail.com |

Expert's Personal Information

Personal Vision

To be a resourceful, useful, and dependable person through acquired managerial skills and inter-personal relationships.

Personal Career Objective

To find a challenging position to meet my competencies, capabilities, skills, education and experience

Personal Skills

Creativity: Am a creative person with a problem solving tool that can bring growth to the organization. I always perform to see that am among the best.

Discipline: I personally believe that each and everybody in the company or organization has an importance to its development. So, I respect everybody.

Drive: I have a strong drive towards achieving goals

Expert's Contact Information

In case of suitable project opportunities, we would like to reach you as quickly as possible.

Eng. Wangi M Godfrey

Water & Irrigation Engineer

Doshnut(U) Ltd

P.O Box 112098,

Kampala, Uganda

+256704832822 / +256782304817

Email: wangimario@gmail.com and techfordcs@gmail.com

Skype: wangi Mario

Certification:

Dated:

13th, March, 2026

MAKERERE



UNIVERSITY

This Is To Certify That

WANGI GODFREY MARIO

was awarded the degree of

DOCTOR OF PHILOSOPHY

and was admitted to the degree
at a Makerere University Congregation
held on *27th February, 2026*

Vice-Chancellor

MCO 00073



Academic Registrar

MAKERERE

P. O. Box 7062 Kampala Uganda
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UNIVERSITY

Tel: +256 - 414 - 532634
Email: ar@mak.ac.ug
Twitter: @MakerereAR

THE OFFICE OF THE ACADEMIC REGISTRAR

February 02, 2026

Mr. WANGI Godfrey Mario
C/o College of Engineering, Design, Art and Technology
Makerere University

Dear Mr. Wangi

AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY

I am glad to inform you that the Chairman of Senate acting on behalf of Senate and on the recommendation of the Board of Research and Graduate Training has approved that the degree of Doctor of Philosophy of Makerere University be awarded to you.

On behalf of the University, I congratulate you upon your success.

Yours sincerely,

Prof. Buyinza Mukadasi
ACADEMIC REGISTRAR

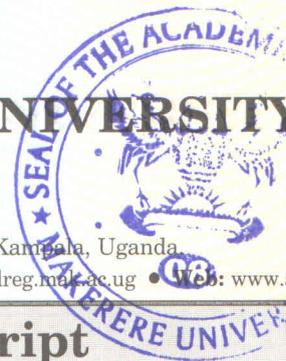


BM/nmi

c.c. The Principal, College of Engineering, Design, Art and Technology



In future correspondence please quote the reference number above



Office of the Academic Registrar, P.O. Box 7062, Kampala, Uganda

Tel: +256-414-531830/533332 • Fax: +256-414-534125 • E-mail: ar@acadreg.mak.ac.ug • Web: www.ar.mak.ac.ug

Academic Transcript

Graduate Programmes

Page 1 of 1

NAME: WANGI Godfrey
REG. No. 2011/HD08/4623U
FACULTY: Technology

SEX: Male
FIRST REGISTERED: 2011
PROGRAM: MTID

NATIONALITY: Ugandan
HALL: Dag Hammarskjold
DATE OF BIRTH: 18 Aug. 1982

Year :1 Academic Year :2011/2012

| Course Code | Course Name | CU | Grade |
|-------------|---|-----|-------|
| TID7101 | TECHNOLOGY INNOVATION AND R&D PRINCIPLES | 4.0 | B+ |
| TID7103 | STRATEGIC MANAGEMENT | 4.0 | C |
| TID7104 | ADVANCED RESEARCH METHODS FOR SCIENCE AND ENGINEERING | 4.0 | A |
| TID7105 | INFORMATION TECHNOLOGY SYSTEMS | 4.0 | C+ |
| TID7107 | PROCESS IMPROVEMENT & MAINTENANCE ENGINEERING | 4.0 | B |

GPA : 4.00 CGPA:4.00

Semester 1
CU Grade
4.0 B+
4.0 C
4.0 A
4.0 C+
4.0 B

Year :1 Academic Year :2011/2012

| Course Code | Course Name | CU | Grade |
|-------------|--|-----|-------|
| TID7201 | ENGINEERING INNOVATION AND ENTREPRENEURSHIP | 4.0 | B |
| TID7202 | LOGISTICS ENGINEERING | 4.0 | C+ |
| TID7203 | ENGINEERING PROGRAMME AND PROJECT MANAGEMENT | 4.0 | B |
| TID7204 | QUALITY MANAGEMENT | 4.0 | B |
| TID7205 | VALUE ENGINEERING AND VALUE MANAGEMENT | 4.0 | B |

GPA : 3.90 CGPA:3.95

Semester 2
CU Grade
4.0 B
4.0 C+
4.0 B
4.0 B
4.0 B

Year :2 Academic Year :2012/2013

| Course Code | Course Name | CU | Grade |
|-------------|--------------|------|-------|
| TID8202 | DISSERTATION | 10.0 | B+ |

GPA : 4.50 CGPA:4.06

Semester 1
CU Grade
10.0 B+

Dissertation Title

"Improvement of Productivity in Small Scale Manufacturing Industries: A Case Study of Metal Fabrication in Uganda."

Remark

The Examiners considered the Dissertation worthy the Award of Master of Science in Technology Innovation and Industrial Development Degree.

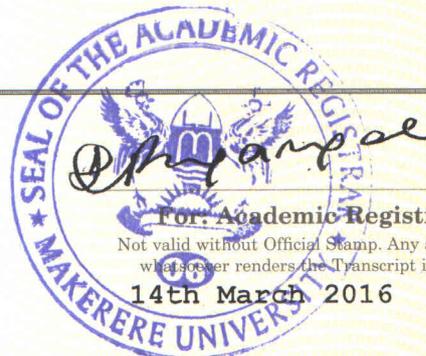
Minimum Graduation Load(CUs):50

Total Credit Units Accumulated: 50

DATE OF COMPLETION:September, 2015

CLASS OF AWARD:Not Classified

AWARD:Master of Science in Technology Innovation and Industrial Development



For: Academic Registrar

Not valid without Official Stamp. Any alteration whatsoever renders the Transcript invalid.

14th March 2016

KEY TO GRADES – GRADUATE PROGRAMMES

Graduate Programmes include:

- Postgraduate Diplomas
- Masters Degrees
- Doctorates
- Higher Doctorates

The Grading System for Graduate Programmes is as follows:

| Registration Up to 1991 | | Registration between 1992-1996 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|-----------------------|-------------|-----------|-------------|----------------------------|-------------|----------------------------|-------------|------|--|-------|--------|------|-------|----------|----|------|--|---------|---|------|-----------------|---------|----|------|-----------------------|---------|---|------|-----------------------|---------|----|------|------------------|---------|---|------|--|---------|----|------|--|---------|---|------|--|---------|---|------|--|---------|----|------|--|----------|---|---|--|--|
| a) Masters Degrees A 80 – 100% Excellent B+ 70 – 79% Very Good B 60 – 69% Good C 50 – 59% Fair/Satisfactory D 45 – 49% (Compensatable Fail) E 00 – 44% Fail | | a) Masters Degrees A 80 – 100% Excellent B+ 70 – 79% Very Good B 60 – 69% Good C 50 – 59% Fair/Satisfactory D 45 – 49% (Compensatable Fail) E 00 – 44% Fail | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| b) Postgraduate Diplomas i) Grading A 70 – 100% Excellent B+ 60 – 69% Very Good B 50 – 59% Good C 40 – 49% Fair/Satisfactory D 35 – 39% (Compensatable Fail) E 00 – 34% Fail ii) Classification 70 – 100% Class One 50 – 69% Class Two 40 – 49% Class Three | | b) Postgraduate Diplomas i) Grading A 80 – 100% Excellent B+ 70 – 79% Very Good B 60 – 69% Good C 50 – 59% Fair/Satisfactory D 45 – 49% (Compensatable Fail) E 00 – 44% Fail ii) Classification 80 – 100% Class One 60 – 69% Class Two 50 – 59% Class Three | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Registration From 1997/98 – 2006/2007 AY | | Registration From 2007/2008 AY | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| a) Masters Degrees and Postgraduate Diplomas: A 80 – 100% 5.0 B+ 75 – 79.9% 4.5 B 70 – 74.9% 4.0 B- 65 – 69.9% 3.5 C+ 60 – 64.9% 3.0 C 55 – 59.9% 2.5 C- 50 – 54.9% 2.0 D+ 45 – 49.9% 1.5 D 40 – 44.9% 1.0 D- 35 – 39.9% 0.5 E Below 35 0 * Pass Mark 50% * From 2007/2008 AY, Pass Mark 60% | Classification of Postgraduate Diplomas: <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>CGPA</th> <th>Class</th> </tr> </thead> <tbody> <tr> <td>4.40 – 5.00</td> <td>1st Class</td> </tr> <tr> <td>3.60 – 4.39</td> <td>2nd Class (Upper Division)</td> </tr> <tr> <td>2.80 – 3.59</td> <td>2nd Class (Lower Division)</td> </tr> <tr> <td>2.00 – 2.79</td> <td>Pass</td> </tr> </tbody> </table> | CGPA | Class | 4.40 – 5.00 | 1st Class | 3.60 – 4.39 | 2nd Class (Upper Division) | 2.80 – 3.59 | 2nd Class (Lower Division) | 2.00 – 2.79 | Pass | <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Grade</th> <th>Letter</th> <th>CGPA</th> <th>Class</th> </tr> </thead> <tbody> <tr> <td>90 – 100</td> <td>A+</td> <td>5.00</td> <td></td> </tr> <tr> <td>80 – 89</td> <td>A</td> <td>5.00</td> <td>4.50 – 5.00 1st</td> </tr> <tr> <td>75 – 79</td> <td>B+</td> <td>4.50</td> <td>4.00 – 4.49 2nd Upper</td> </tr> <tr> <td>70 – 74</td> <td>B</td> <td>4.00</td> <td>3.50 – 3.99 2nd Lower</td> </tr> <tr> <td>65 – 69</td> <td>C+</td> <td>3.50</td> <td>3.00 – 3.49 Pass</td> </tr> <tr> <td>60 – 64</td> <td>C</td> <td>3.00</td> <td></td> </tr> <tr> <td>55 – 59</td> <td>D+</td> <td>2.50</td> <td></td> </tr> <tr> <td>50 – 54</td> <td>D</td> <td>2.00</td> <td></td> </tr> <tr> <td>45 – 49</td> <td>E</td> <td>1.50</td> <td></td> </tr> <tr> <td>40 – 44</td> <td>E-</td> <td>1.00</td> <td></td> </tr> <tr> <td>Below 40</td> <td>F</td> <td>0</td> <td></td> </tr> </tbody> </table> | Grade | Letter | CGPA | Class | 90 – 100 | A+ | 5.00 | | 80 – 89 | A | 5.00 | 4.50 – 5.00 1st | 75 – 79 | B+ | 4.50 | 4.00 – 4.49 2nd Upper | 70 – 74 | B | 4.00 | 3.50 – 3.99 2nd Lower | 65 – 69 | C+ | 3.50 | 3.00 – 3.49 Pass | 60 – 64 | C | 3.00 | | 55 – 59 | D+ | 2.50 | | 50 – 54 | D | 2.00 | | 45 – 49 | E | 1.50 | | 40 – 44 | E- | 1.00 | | Below 40 | F | 0 | | |
| CGPA | Class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4.40 – 5.00 | 1st Class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.60 – 4.39 | 2nd Class (Upper Division) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.80 – 3.59 | 2nd Class (Lower Division) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.00 – 2.79 | Pass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Grade | Letter | CGPA | Class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 90 – 100 | A+ | 5.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 80 – 89 | A | 5.00 | 4.50 – 5.00 1st | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 – 79 | B+ | 4.50 | 4.00 – 4.49 2nd Upper | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 70 – 74 | B | 4.00 | 3.50 – 3.99 2nd Lower | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 65 – 69 | C+ | 3.50 | 3.00 – 3.49 Pass | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 60 – 64 | C | 3.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55 – 59 | D+ | 2.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 50 – 54 | D | 2.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 45 – 49 | E | 1.50 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 40 – 44 | E- | 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Below 40 | F | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | <ul style="list-style-type: none"> • Masters Degrees and Doctorates are not Classified • The Medium of Instruction is ENGLISH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

KEY TO RESULTS / GRADING CODES

| | | | |
|---|--|---------------------------------|--|
| AB Absent | RW Results Withheld | FE Failed Elective | UE University Exhibition |
| RR Results obtained after a Repeat Year | SE Special Examination Granted | NE Not Examinable | CGPA Cumulative Grade Point Average |
| Ex Exempt | WD Withdrawal Granted | CTR Course to be Retaken | PP Probationary Progress |
| IP In Progress | RT Results obtained after Retaking a Course | GPA Grade Point Average | AC Audited Course |
| DY Dead Year Granted | GP Grade Point | EC Extra Course | NP Normal Progress |
| RS Results obtained after Supplementary Examinations | EL Elective Course | RE Results Expected | CP Conceded Pass |

KEY TO NATIONALITY CODES IN THE REGISTRATION NUMBER

U = Ugandan

T = Tanzanian

K = Kenyan

X = Others



KEY TO FACULTY/INSTITUTE/SCHOOL ABBREVIATIONS

| | |
|--|---|
| EASLIS East African School of Library and Information Science | MTSIFA Margaret Trowell School of Industrial and Fine Arts |
| IACE Institute of Adult and Continuing Education | MUBS Makerere University Business School |
| ISAE Institute of Statistics and Applied Economics | FEMA Faculty of Economics and Management |
| MUIP Makerere University Institute of Psychology | MUIENR Makerere University Institute of Environment and Natural Resources |
| FNC Faculty of Forestry and Nature Conservation | IPH/MUSPH Institute of Public Health/Makerere University School of Public Health |
| FCIT Faculty of Computing and Informatics Technology | |

MAKERERE



UNIVERSITY

This Is To Certify That

GODFREY WANGI

was awarded the degree of

**MASTER OF SCIENCE IN
TECHNOLOGY INNOVATION AND
INDUSTRIAL DEVELOPMENT**

and was admitted to the degree
at a Makerere University Congregation
held on *19th January, 2016*


Vice-Chancellor

MLO 00020


Academic Registrar

MAKERERE

P. O. Box 7062
Kampala Uganda
Website: www.mak.ac.ug



UNIVERSITY

Tel: +256 - 414 - 530983/691937
Fax: +256 - 414 - 533809
Email: drgt@rgt.mak.ac.ug

DIRECTORATE OF RESEARCH AND GRADUATE TRAINING

February 29, 2016

Mr. Wangi Godfrey
c/o College of Engineering Design, Art and Technology
Makerere University

Dear **Mr. Wangi**,

AWARD OF THE DEGREE OF MASTER OF SCIENCE IN TECHNOLOGY INNOVATION AND INDUSTRIAL DEVELOPMENT "PLAN A"

I am glad to inform you that the Chairman of Senate acting on behalf of Senate and on the recommendation of the Board of Research and Graduate Training has approved that the degree of Master of Science in Technology Innovation and Industrial Development "Plan A" of Makerere University be awarded to you.

On behalf of the University, I congratulate you upon your success.

Yours sincerely

Alfred Masikye Namooah
ACADEMIC REGISTRAR

c.c. The Principal, College of Engineering, Design, Art and Technology

AMN/SAM/nmi

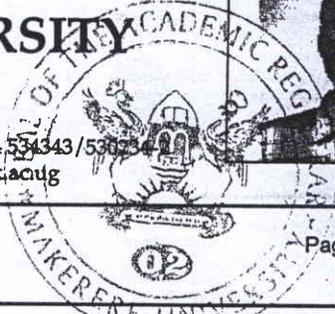


Office of the Academic Registrar, P. O. Box 7062 Kampala Uganda. Tel: +256 414 534343/5367344
 Fax: +256 414 534125; E-mail: ar@acadreg.mak.ac.ug; website: ar.mak.ac.ug



Academic Transcript

Undergraduate Programmes



NAME: WANGI Godfrey SEX: Male NATIONALITY: Ugandan
 REG. No. 04/U/278 FIRST REGISTERED: 2004 HALL: University Hall
 FACULTY: Agriculture PROGRAM: BSC(AGE) DATE OF BIRTH: 18 Aug, 1982

| Year :1 | Academic Year :2004/2005 | Semester 1 | CU Grade | Year :4 | Academic Year :2007/2008 | Semester 1 | CU Grade |
|----------------------|---|------------|----------|----------------------|--------------------------------|------------|----------|
| AEN1105 | ENGINEERING DRAWING | 4.0 | C+ | AEN3205 | FARM MACHINERY | 3.0 | B- |
| AEN1106 | ENGINEERING MECHANICS I | 4.0 | C- | AEN3206 | DESIGN OF PROCESSING EQUIPMENT | 3.0 | B |
| AEN1107 | ELECTRICAL ENGINEERING I | 4.0 | B- | AEN3207 | AGRICULTURAL STRUCTURES | 3.0 | C+ |
| AEN1108 | AGRICULTURAL ENGINEERING IN DEVELOPMENT | 3.0 | B- | AEN3208 | DESIGN OF MACHINE ELEMENTS | 3.0 | B+ |
| AEN1110 | ENGINEERING MATHEMATICS I | 4.0 | C+ | AEN3209 | ENVIRONMENTAL ENGINEERING | 3.0 | A |
| GPA : 2.97 CGPA:2.97 | | | | GPA : 4.14 CGPA:4.00 | | | |

| Year :1 | Academic Year :2004/2005 | Semester 2 | CU Grade | Year :4 | Academic Year :2007/2008 | Semester 1 | CU Grade |
|----------------------|----------------------------|------------|----------|----------------------|---|------------|----------|
| AEN1205 | MECHANICS OF MATERIALS I | 4.0 | B+ | AEN3301 | INDUSTRIAL TRAINING II | 5.0 | B- |
| AEN1207 | THERMODYNAMICS I | 4.0 | B- | AEN4102 | SOIL AND WATER ENGINEERING II | 3.0 | B |
| AEN1208 | ENGINEERING MECHANICS II | 4.0 | B | AEN4105 | ENGINEERING EXPERIMENTAL DESIGN | 3.0 | C+ |
| AEN1209 | ENGINEERING MATHEMATICS II | 4.0 | B- | AEN4106 | DESIGN PROJECT PLANNING | 3.0 | B |
| AEN1210 | INTRODUCTION TO COMPUTERS | 2.0 | B | AEN4107 | DESIGN OF AGRICULTURAL MACHINERY | 3.0 | B- |
| SOS1206 | SOIL SCIENCE FOR ENGINEERS | 3.0 | C+ | AEN4108 | IRRIGATION SYSTEM DESIGN AND MANAGEMENT | 3.0 | B+ |
| GPA : 3.76 CGPA:3.39 | | | | GPA : 3.72 CGPA:3.95 | | | |

| Year :2 | Academic Year :2005/2006 | Semester 1 | CU Grade | Year :4 | Academic Year :2007/2008 | Semester 2 | CU Grade |
|----------------------|------------------------------------|------------|----------|----------------------|---------------------------------|------------|----------|
| AEN1302 | WORKSHOP PRACTICE | 5.0 | C | AEC4211 | ENGINEERING ECONOMICS | 3.0 | C+ |
| AEN2104 | ENGINEERING MATHEMATICS III | 4.0 | A | AEN4204 | DESIGN PROJECT | 5.0 | C |
| AEN2105 | MECHANICS OF MATERIALS II | 4.0 | B+ | AEN4205 | OPERATIONS RESEARCH | 3.0 | B |
| AEN2106 | COMPUTER AIDED DESIGN AND DRAFTING | 4.0 | B+ | AEN4206 | NEW VENTURES & ENTREPRENEURSHIP | 3.0 | C |
| AEN2108 | FLUID MECHANICS | 4.0 | A | AEN4208 | LAND EVALUATION FOR IRRIGATION | 3.0 | C+ |
| CRS2105 | CROP SCIENCE FOR ENGINEERS | 3.0 | B+ | FOM4201 | LAND USE POLICY AND LAW | 3.0 | C |
| GPA : 4.35 CGPA:3.75 | | | | GPA : 2.88 CGPA:3.83 | | | |

| Year :2 | Academic Year :2005/2006 | Semester 2 | CU Grade | Minimum Graduation Load(CU):170 Total Credit Units Accumulated: 177 | | | |
|----------------------|---------------------------|------------|----------|---|--|--|--|
| AEN2206 | HYDRAULICS AND HYDROLOGY | 3.0 | B+ | Completion Date: May/June, 2008 Graduation Date: 19th January, 2009 | | | |
| AEN2207 | MATERIAL SCIENCE | 4.0 | B+ | Award: Bachelor of Science in Agricultural Engineering | | | |
| AEN2208 | POST HARVEST ENGINEERING | 3.0 | B- | Class Of Award: Second Class Honours - Upper Division | | | |
| AEN2209 | THEORY OF MACHINES | 4.0 | A | | | | |
| AEN2211 | ELECTRICAL ENGINEERING II | 3.0 | A | | | | |
| AEN2217 | COMPUTING PROGRAMMING | 4.0 | C+ | | | | |
| GPA : 4.24 CGPA:3.87 | | | | | | | |

| Year :3 | Academic Year :2006/2007 | Semester 1 | CU Grade | <div style="border: 1px solid black; padding: 5px;"> <p>MAKERERE UNIVERSITY CERTIFIED TRUE COPY OF ORIGINAL</p> <p>★ 30 JUN 2011 02</p> <p>SIGN:..... for ACADEMIC REGISTRAR</p> </div> | | | |
|----------------------|---------------------------------------|------------|----------|---|--|--|--|
| AEN2301 | INDUSTRIAL TRAINING I | 5.0 | B | | | | |
| AEN3102 | SOIL MECHANICS | 3.0 | B | | | | |
| AEN3105 | FARM POWER | 3.0 | A | | | | |
| AEN3106 | AGRICULTURAL PROCESSING ENGINEERING I | 3.0 | A | | | | |
| AEN3107 | RURAL ELECTRIFICATION | 3.0 | B+ | | | | |
| AEN3109 | CLIMATOLOGY AND HYDROLOGICAL MODELING | 3.0 | B | | | | |
| ANS3103 | ANIMAL SCIENCE FOR ENGINEERS | 3.0 | B- | | | | |
| EEE3104 | RURAL EXTENSION FOR ENGINEERS | 3.0 | B+ | | | | |
| GPA : 4.29 CGPA:3.97 | | | | | | | |

| Year :3 | Academic Year :2006/2007 | Semester 2 | CU Grade |
|---------|----------------------------|------------|----------|
| AEN3204 | WATER RESOURCE ENGINEERING | 3.0 | B |

- A Credit Unit (C.U.) is one Contact Hour per week per Semester or a series of fifteen (15) Contact Hours.
- The length of a Semester is seventeen (17) weeks, two (2) of which are for examinations.
- Transcripts issued after April 2002 shall bear Photographs

The medium of instruction is ENGLISH

* (CP) - Conceded Pass

For: Academic Registrar
 Not Valid without Official Stamp. Any alteration whatsoever renders the transcript invalid.
 27th May 2009

For Key to Grades and Remarks, See Reverse

Uganda National Examinations Board



This is to certify that the candidate named below sat for the Uganda Certificate of Education Examination in the year 2001, and qualified for the award of the

Uganda Certificate of Education

DIVISION I

THE CANDIDATE REACHED THE GRADE SHOWN IN THE SUBJECTS NAMED.

WANGI GODFREY

U0048/183

MASAKA SECONDARY SCHOOL

P.O BOX 212 MASAKA

| | GRADE |
|----------------------|-----------------------|
| ENGLISH | 3 (THREE) |
| HISTORY | 2 (TWO) |
| GEOGRAPHY | 5 (FIVE) |
| FRENCH | 4 (FOUR) |
| MATHEMATICS | 1 (ONE) |
| PHYSICS | 1 (ONE) |
| CHEMISTRY | 2 (TWO) |
| BIOLOGY | 3 (THREE) |
| PRINC OF ACCOUNTS | 1 (ONE) |
| SUBJECTS NAMED: NINE | SUBJECTS PASSED: NINE |

Secretary

Uganda National Examinations Board



Chairman

Uganda National Examinations Board

Not valid without a hologram with the UNEB crest.
Hold this document to the light to verify  can be seen through the paper.
A thread is running vertically through the sheet.

U 788182

(See overleaf)

A 0580168



EXAMINATION FOR THE UGANDA ADVANCED CERTIFICATE OF EDUCATION

WANGI GODFREY
MASAKA SECONDARY SCHOOL

U004B 786

GENERAL PAPER
MATHEMATICS
PHYSICS
CHEMISTRY
BIOLOGY

SUBSIDIARY PASS
PRINCIPAL PASS
PRINCIPAL PASS
PRINCIPAL PASS
PRINCIPAL PASS

*** U.A.C.E. RESULT S *** A

| Subject Grade | Paper Grades | | | | | | | | |
|------------------|--------------|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 5 | | | | | | | | | |
| B | 2 | 4 | | | | | | | |
| C | 4 | 5 | 3 | | | | | | |
| D | 5 | 5 | 5 | | | | | | |
| D | 5 | 2 | 7 | | | | | | |

2003 U.A.C.E.

NOV/DEC 2003

ENTRY CODE 5

This result slip is not a certificate. The Uganda National Examinations Board reserves the right to correct the information given on results slips which will be confirmed by the issue of certificates.

(See overleaf)