

## **MATSOSE TSHIRELETSO LYDIA**

071 016 0454

lydiatshireletso311@gmail.com

0269 Bapong

106 Oustad

### **OBJECTIVE**

I am a very hard-working student who is currently studying Geomatics in the faculty of engineering and built in environment at Tshwane university of Technology, I am seeking in-service training to complete my studies. This opportunity will help me to gain practical experience and allow me to apply my knowledge about surveying, geographic information system and remote sensing.

### **EDUCATION**

2018-2022

**Mogale secondary school (situated at Bapong skoolplaas)**

I have obtained bachelor pass after completing grade 12.

- > Setswana home language
- > English first additional language
- > Technical mathematics
- > Life orientation
- > Electrical technology (power system)
- > Engineering graphic and design
- > Technical science

### **Currently in Tshwane university of Technology**

I have completed my first year in 2023

Completed first year modules

- > Engineering surveying fundamentals IA
- > Geomatics computer applications
- > Geography
- > Mathematics IA
- > Physics
- > Computer survey drawing
- > Geodesy and map projections
- > Communication skills
- > Information literacy
- > Life skills

I have completed my second year in 2024

Completed second year modules

- > Mathematics IB
- > Cadastral system fundamentals
- > Engineering surveying fundamentals IB
- > Geomatics control project
- > Geographic information system
- > Remote sensing

## SKILLS

- > Communication skills, the ability to effectively communicate technical information both non-technical and technical audience
- > Surveying equipment, I have practical experience of using total station, global positioning system and levelling with theoretical knowledge
- > Computer skills, I can use applications such as Model maker, python, Microsoft Excel, ArcGIS and google Earth
- > Remote sensing and photogrammetry, I understand remote sensing technologies and applications.
- > Data analysis, I have experience in databases and spatial data models.

### Practicals completed

The year 2023 I attended a practical camp at Toppieshook for school project. I had group members for the project which we completed determining levelling for Rise and Fall, Errors, Levelling cross section and longitudinal section lastly calculating areas and volumes.

The year 2024 in August we attended practical camp again in Toppieshook. The tasks were setting out a traverse and calculations, Batters, Profiles, topographic surveying and setting out horizontal curves. In September we went again for another project, The aim of the project was to solve unknown points using eccentric, resection, intersection and traverse of speed and accurate, which we completed successfully using GPS and Total stations.

## REFERENCES

MS. LETTIE MOKUA-THIPE, ENGINEERING SURVEYING LECTURER 065 831 0605  
MR. KUWAKURIME, ANALYTICAL STATISTICS LECTURER 064 589 9880



REPUBLIC OF SOUTH AFRICA

# National Senior Certificate

Awarded to

**TSHIRELETSO LYDIA MATSOSE**

I HEREBY CERTIFY THAT THIS IS A TRUE REPRODUCTION (COPY) OF THE ORIGINAL DOCUMENT WHICH WAS HANDLED TO ME FOR AUTHENTICATION. I FURTHER CERTIFY THAT FROM MY OBSERVATIONS, AN AMENDMENT OR A CHANGE WAS NOT MADE TO THE ORIGINAL DOCUMENT.  
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 NAAM IN DE WATERSKRIF: J. PLESSIS, CLEP  
 TEL: 0804439-2

Identity number 0403241123088

Exam number 9221111370060

Subject	%	Achievement level
Setswana Home Language	77	6
English First Additional Language	69	5
Technical Mathematics	51	4
Life Orientation	71	6
Electrical Technology (Power Systems)	56	4
Engineering Graphics and Design	32	2
Technical Sciences	52	4
*****		***

This candidate is awarded the National Senior Certificate and has met the minimum requirements for admission to bachelor's degree, diploma or higher certificate study as gazetted for admission to higher education, subject to the admission requirements of the higher education institution concerned.

With effect from December 2022

**M. S. LAKOMETSI**

Chief Executive Officer

This certificate is issued without alterations or erasure of any kind



# UMALUSI



Council for Quality Assurance in  
General and Further Education and Training  
South Africa

3841837



# Tshwane University of Technology

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Academic transcript

Issuing Institution : Tshwane University of Technology PRODI41

Name : MATSOSE TSHIRELETSO LYDIA

Student Number : 231770771

Identity Number : 0403241123088

Date Of Birth : 24-MAR-2004

Year : 2023 DIPLOMA IN GEOMATICS

National Qualification ID : 119112 Credit : 384

National Level : Advanced Certificate, Diploma (06)

Designator : NOT APPLICABLE

Qualifier : GEOMATICS

YEAR (JAN-DEC)

		National Level	National Credit
COMMUNICATION SKILLS	82 PASS WITH DISTINCTION	05	6.00
ENGINEERING SURVEYING FUNDAMENTALS I	55 PASS	05	28.00
GEOMATICS COMPUTER APPLICATIONS	66 PASS	05	19.00
INFORMATION LITERACY	60 PASS	05	1.00
LIFE SKILLS	79 PASS WITH DISTINCTION	05	2.00
FIRST SEMESTER (JAN-JUN)		National Level	National Credit
GEOGRAPHY	59 PASS	05	6.00
MATHEMATICS IA	50 PASS	05	12.00
PHYSICS	55 PASS	05	10.00
SECOND SEMESTER (JUL-DEC)		National Level	National Credit
COMPUTER SURVEY DRAWING	59 PASS	05	12.00
GEODESY AND MAP PROJECTIONS	67 PASS	05	12.00
MATHEMATICS IB	NO ADMISSION TO EXAM	05	

Year : 2024 DIPLOMA IN GEOMATICS

National Qualification ID : 119112 Credit : 384

National Level : Advanced Certificate, Diploma (06)

Designator : NOT APPLICABLE

Qualifier : GEOMATICS

YEAR (JAN-DEC)

		National Level	National Credit
APPLIED PHOTOGRAMMETRY	NO RESULT	06	
ENGINEERING SURVEYING FUNDAMENTALS II	NO RESULT	06	
GEOMATICS CONTROL PROJECT	NO RESULT	06	
GEOGRAPHIC INFORMATION SYSTEMS	NO RESULT	06	

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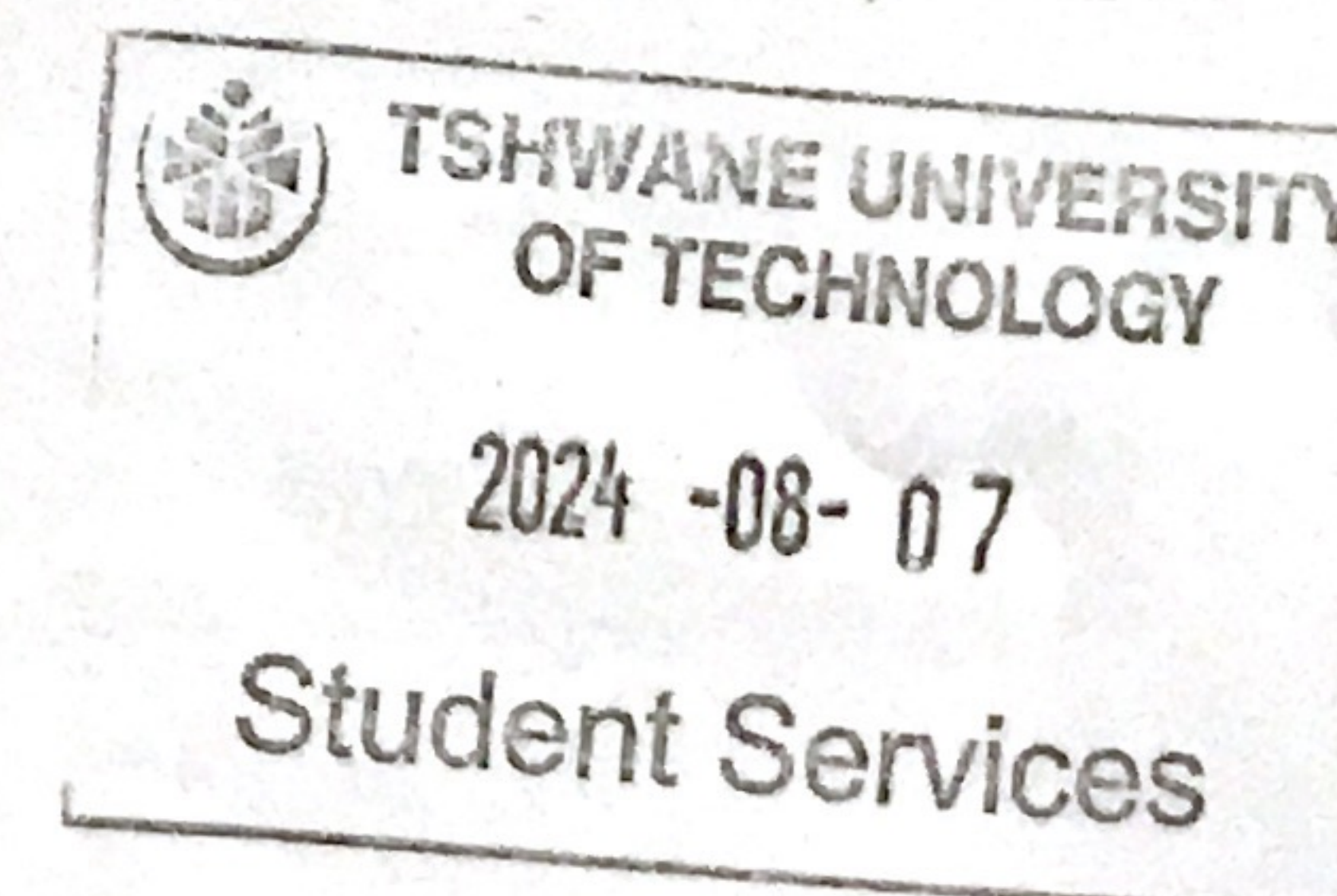
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# Tshwane University of Technology

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Academic Transcript

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Name : MATSOSE TSHIRELETSO LYDIA

Student Number : 231770771

Identity Number : 0403241123088

REMOTE SENSING

SECOND SEMESTER (JUL-DEC)

CADASTRAL SYSTEMS FUNDAMENTALS

MATHEMATICS IB

Date Of Birth : 24-MAR-2004

NO RESULT

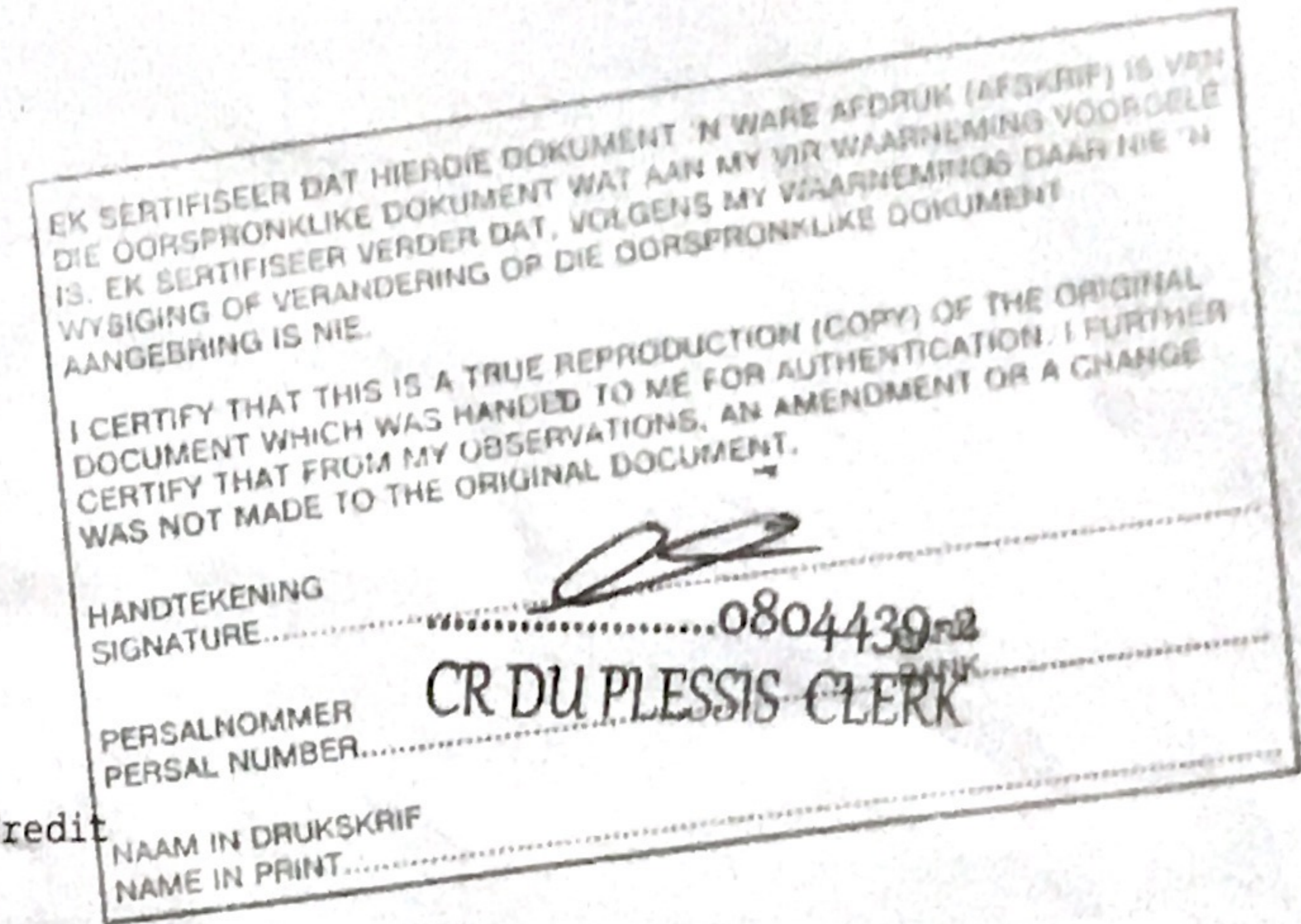
NO RESULT

NO RESULT

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06 National Level National Credit  
06  
05

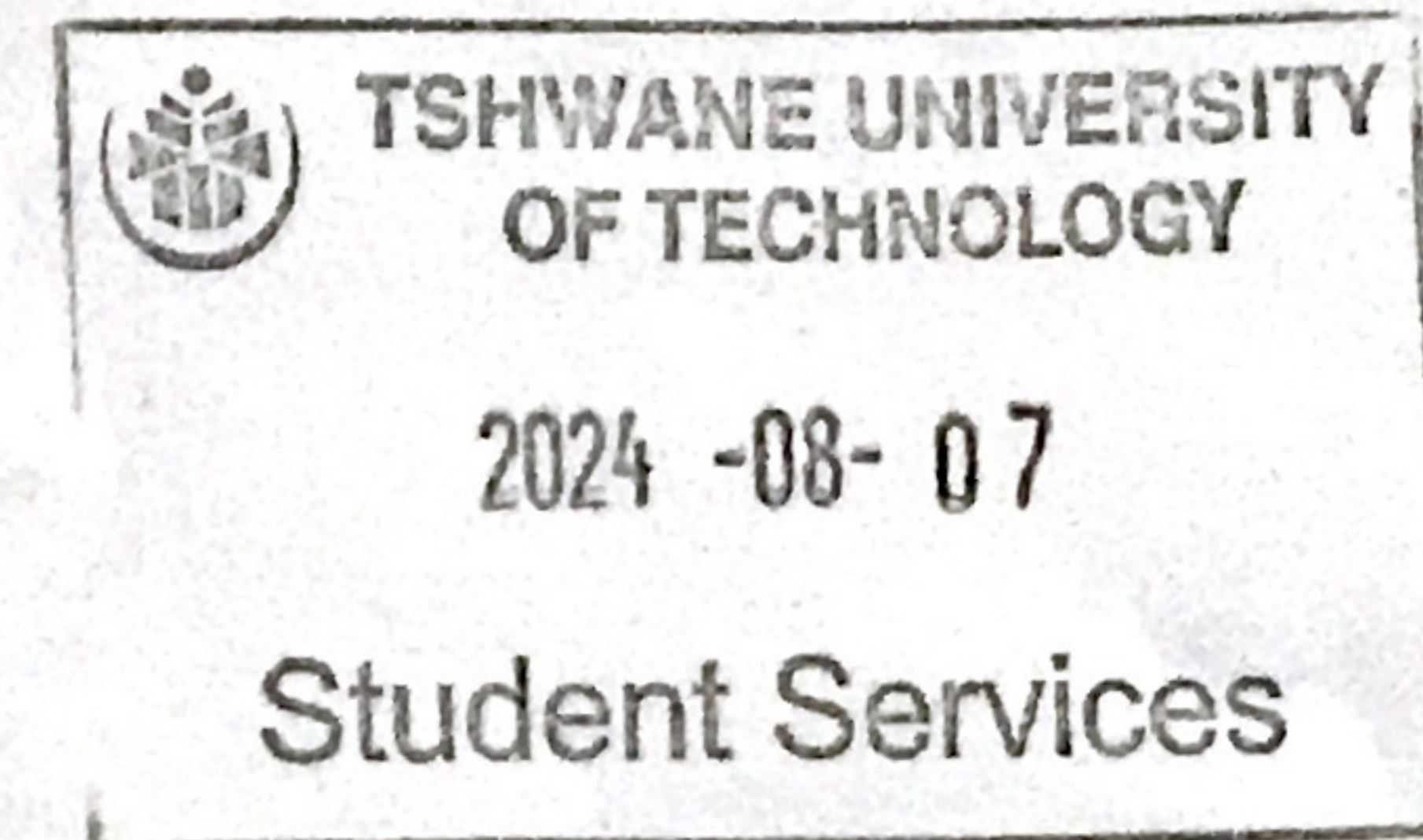


I hereby declare that  
MATSOSE TSHIRELETSO LYDIA  
was a registered student at this university during the above mentioned  
years and that his / her conduct was satisfactory.

REGISTRAR

08-AUG-2024

\*National Level Key  
10 - Higher Certificate  
11 - Advanced Certificate, Diploma



Last Page

**TO WHOM IT MAY CONCERN  
WORK INTERGRATED LEARNING: DIPLOMA IN GEOMATICS (DPGM23)**

**STUDENT NAME(S):** TSHIRELETSO LYDIA  
**STUDENT SURNAME:** MATSOSE  
**STUDENT NUMBER:** 231770771  
**STUDENT ID:** 0403241123088

Herewith to confirm that the above-mentioned student is a registered student at the Tshwane University of Technology and enrolled for the course Diploma in Geomatics course (DPGM23). The student is currently registered for her second-year subjects and will continue with Work Integrated Learning (practical) in 2025.

The Diploma in Geomatics course (DPGM23) consists of a total period of three years, two years of theoretical training at the Tshwane University of Technology and one year of Work Integrated Learning in industry. If the student does not complete Work Integrated Learning, he/she cannot obtain his/her diploma.

The student needs to complete one full year of Work Integrated Learning (practical) after two years of theory (Y1 & Y2) at the University.

When the student registers for Work Integrated Learning (practical) he/she receives online access on the *myWIL* portal to continuously submit progress reports and upload supporting documents, conduct self-assessments and provide feedback to the Mentors/Employers and Academic Assessors in real time. Mentors/Employers and Assessors, who are assigned to the student, can access this online platform to review and comment on the student's submissions. Students are also able to view all feedback and assessments from their Mentors and Academic Assessors in real time, including evaluations of completed tasks. Access to the online *myWIL* to external TUT Mentors or Employers will be made after student registration for industry work.

At the end of the Work Integrated Learning training, students provide feedback to the University on curriculum and performance related issues. These feedback reports are an essential component to improving the quality and relevance of the qualifications offered by the University. **It is therefore essential that the student work under the guidance of a qualified Surveyor that is registered with SAGC in the relevant category with relevant experience.** The department will require the SAGC registration number and/or certificate to confirm suitability of the mentor/employer that will be supervising the student. During this period the student and mentor/employer will be visited at least once in the year in person to monitor the student's progress and possibly once again (either virtually or in person). These visits are conducted by TUT academic staff.

Work Integrated Learning training is regarded as a subject and the student has to register for it the same way as all the other subjects. The registration fees will be determined by the Registration Department and will be adjusted from time to time. **It is important to note that the student must register for the subject within a one-year period.** During this period the student is not allowed to register for fulltime courses that will require the student to attend lectures and undertake practicals on campus. Students may request deviation from this arrangement with the Head of Department and each case is considered on its own merit.

Attached is an example of the activities during a student's training period. These activities are aligned with the South African Geomatics Council's requirements to fulfil the requirements for registration in the Geomatics Practitioner (Engineering Surveying Technician) category. TUT is considered an accredited training site by the Council by virtue of their accreditation of the DPGM23. TUT will issue letters to the student to support the SAGC registration process upon successful completion of the work integrated learning.

I hope the information is satisfactory. For further information, please contact me at the following number or email mentioned below:

Regards,



Mr K Reddy  
Geomatics Head of Department

Contact details of Department WIL coordinator to direct all queries (always include your student number and contact details)

Mrs LT Moku-Thipe  
Junior Lecturer & WIL Coordinator  
Department of Geomatics  
Faculty of Engineering and the Built Environment  
Building 3: 423, Pretoria Campus  
Tel nr: +27 12 382 3536  
E-mail: [mokualt@tut.ac.za](mailto:mokualt@tut.ac.za) / [geomatics@tut.ac.za](mailto:geomatics@tut.ac.za)

### WORK CATEGORIES

The following work categories is extracted from the SAGC Notes for Guidance as part of the work experience required for registration as a Geomatics Technician in the Engineering Surveying category.

### COMPULSORY TRAINING.

80 working days in basic survey work comprising:

	TYPE OF SURVEY	WORKING DAYS
1	<b>TRIANGULATION:</b> <b>(Minimum 20 days)</b> <ul style="list-style-type: none"><li>• By angular measurement</li><li>• By distance measurement</li><li>• By GPS, where applicable</li></ul>	20
2	<b>LEVELLING:</b> <b>(Minimum 15 days)</b> <ul style="list-style-type: none"><li>• Spirit Leveling</li><li>• Precise levelling;</li><li>• Trigonometric levelling;</li><li>• Heighting by GPS where applicable;</li><li>• Adjustment of a levelling network.</li></ul>	15
3	<b>TRAVERSING:</b> <b>(Minimum 15 days)</b> <ul style="list-style-type: none"><li>• Using total stations or EDM equipment;</li><li>• Checked by GPS, if equipment available.</li></ul>	15
4	<b>TOPOGRAPHICAL SURVEYING:</b> <b>(Minimum 10 days)</b> <ul style="list-style-type: none"><li>• Detail surveying by total station, GPS or traditional methods.</li><li>• Includes Photogrammetric Field Work with an aerial survey firm, Professional Surveyor, Engineering Surveyor, government department or a firm doing similar work.</li></ul>	10

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5	<b>COMPUTER DATA PROCESSING:</b> <b>(Minimum 10 days)</b> <ul style="list-style-type: none"> <li>• Survey and CAD Applications</li> <li>• Computer based reporting</li> <li>• Programming &amp; Data processing</li> <li>• Internet Base OR Trignet GNSS</li> </ul>	10
6	<b>GEOMATICS ENGINEERING / CONSTRUCTION:</b> <b>(Minimum 10 days)</b> <ul style="list-style-type: none"> <li>• Dimension, Verticality &amp; Deformation Monitoring for Structures</li> <li>• Dam, Construction (Road/Rail) Surveys</li> <li>• Metrology</li> </ul>	10
<b>TOTAL DAYS</b>		<b>80</b>

NB!! All these surveys are to satisfy the required standards of accuracy as set out in the Land Survey Act No. 8 of 1997 and Regulations, or as otherwise specified.

#### **ADDITIONAL TRAINING.**

A minimum of **140 working days** in the following types of survey of which not less than **10 days** nor more than **120 days** will be acceptable in any four (4) of the following options:

- **Cadastral Surveys** with a Professional Land Surveyor, government department or an organisation doing such work.
- **Control Surveys** with a Professional Surveyor, Engineering Surveyor, a government department or an organisation doing such work.
- **Precise Engineering Surveys** with a Professional Surveyor or Professional Engineer, or Engineering Surveyor, with an engineering or construction company, or local authority, or an organisation doing such work.
- **Topographical Surveys** (in addition to the compulsory training above) with an aerial survey firm, Professional Surveyor, Engineering Surveyor, government department or a firm doing similar work.
- **Engineering/Construction Surveys** (in addition to the compulsory training above) with a Professional Surveyor or Professional Engineer, or Engineering Surveyor, with an engineering or construction company, or local authority, or an organisation doing such work.
- **Hydrographic Surveys** with a government department, the Hydrographic Survey of the Navy or any other operation or firm undertaking such work.

#### ***The following should be noted:***

- I. The number of working days quoted for compulsory and additional training includes both office and field work
- II. The ratio of office to field work should not exceed 2: 1 and should include calculations, draughting and normal administrative operations.
- III. A detailed day to day diary of all survey work undertaken during the training period shall be kept.
- IV. Experience in the various fields of survey shall not be one-sided and must include adequate and varied training meeting the requirements above.

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