water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

LEARNING ACADEMY

GRADUATE TRAINEE (GT) LOGBOOK

QUALIFICATION

ND: SURVEYING

INITIALS AND SURNAME

YEAR OF COMMENCEMENT

2012

PERSAL NUMBER

Table of Contents

SECTION 1

DEFINITIONS, GENERAL INFORMATION AND ROLES AND RESPONSIBILITIES

1. DEFINITIONS

TERM	DEFINITION
Learning academy	A departmental institution initiated and supported by government to address development of skills in the various disciplines
Professional bodies	A structured body controlling the competence of a candidate member in the respective field of qualification in accordance with the relevant legislation and applicable requirements
Director: WLA	The head of the Learning Academy ensuring compliance of training and workplace exposure of Graduate Trainees with professional body requirements
Project Coordinator	A person facilitating, co-ordinating and supporting all Learning Academy activities
Stream leader	A person facilitating and co-ordinating the management of mentors
Mentor	A person overseeing the training and workplace exposure of the Graduate Trainee
Supervisor	A person undertaking daily supervision and training in accordance with a structured training program
Graduate Trainee	A candidate undertaking relevant training and workplace exposure with the intention of registering as a professional with the relevant professional body when applicable
Structured training program	A time bound program designed by professionals complying with professional body requirements and standards

2. GENERAL INFORMATION

The Graduate Trainee is contractually appointed for a maximum duration of **5 years** to undertake a structured training program in order to obtain professional status.

A stream leader will be allocated by the Project Coordinator in the specific field of qualification.

A mentor, in addition to the supervisor, will be allocated to the Graduate Trainee by the stream leader for specific time frames on a rotational basis. The mentor will ensure implementation of the relevant structured training program. The mentor may in turn appoint a supervisor.

Proper ***lines of communication*** must be adhered to i.e.

- Graduate Trainee ⇔ Supervisor/ Mentor ⇔ Stream Leader ⇔ Project Coordinator ⇔ Director: WLA

3. PLATO POLICY STATEMENT - ENGINEERING TECHNICIAN

(a) **Engineering Surveyors** are people who recommend, control, administer and implement *known or novel technology* in an innovative manner in a discipline, sub-discipline or specialisation of engineering. 'Surveyor' means a person registered as such in terms of section 22 (2) or (3) of the PLATO Act 40 of 1984.

(b) Engineering Survey Technicians are people who have an educational qualification recognised by Council. 'Survey technician' means a person registered as such in terms of section 22 (2) or (3) of the PLATO Act 40 of 1984.

3.1. Significance of registration as a Engineering Surveyor

The significance of registration as an Engineering Surveyor is that:

(a) It is a commitment to subscribe to the ***standards*** set by PLATO and to work within the PLATO Code of Conduct.
(b) It is ***proof of competency*** in terms of the standards of a PLATO.

These features contribute to the protection of the public with respect to the work of a registered person and lend confidence in appointing such a person to carry out Survey work.

3.2. Criteria for Registration

(a) In the case of a person applying for registration as an Engineering Survey Technician and has satisfied the relevant educational outcomes determined by the council for this purpose, by:

*(i) Certified copy of the **National Diploma: Surveying** or an equivalent recognised by the Education Advisory Committee.*
*(ii) Certificate to the effect that the **experiential training by the candidate had been approved** by the UoT and/or certificates from suitably qualified persons covering the required training.*
(iii) Certificate from a UoT indicating that a trial survey or equivalent practical test has been completed.
*(iv) A **law examination** as outlined in Section 6 (Annexure A).*
*(v) The relevant **application form** completed before a Commissioner of Oaths.*

(b) In the case of a person applying for registration as a Engineering Surveyor

*(i) has demonstrated his or her **competence** as measured against standards determined by the council for the relevant category of registration;* **and**
*(ii) has **passed any additional examinations** that may be determined by the council.*

3.3. Engineering Work for Engineering Surveyor

Practical training should result in the Engineering Survey Technician developing the *competence* required for *registration* as an Engineering Surveyor. It *includes* but is not limited to an appropriate combination of:

a) Cadastral Surveys
b) Control Surveys
c) Topographical Surveys (Compulsory)
d) Engineering/Construction Surveys (Compulsory)
e) Hydrographic Surveys

The training of Engineering Surveyor enables them to implement *known and novel technology* in an innovative manner to complete Engineering Survey work. Practical training leads to autonomy and competence regarding evaluation, consultation and implementation of work. This enables individuals to take professional responsibility for work.

An Engineering Survey Technician would normally complete the Practical Training phase upon registration as an Engineering Surveyor.

3.4. Duration of Practical Training

The *minimum* duration of practical training is *three years (720 days Survey field and office work) as per PLATO requirements.*

3.5. Scope of Practical Training

(a) The scope of training should be as described in the PLATO Surveyors (Engineering) Notes (Annexure A)
(b) Social, economic, safety, health and environmental issues within engineering practice.
(c) Engineering Survey Technician to develop their skills to communicate effectively, covering oral, written, drawn & electronic communication.
(d) Independent work, teamwork, supervision and management.
(e) Increasing responsibility and accountability for work.

Training must be developmental, building upon the knowledge and skill gained through the educational qualification. This is indicated through innovation in the application of technology, acquisition of knowledge through research, additional studies and continuing professional development, and increasing scope of work.

3.6. Level/Range of Training

In the setting up of a training program the following are considered appropriate:

(a) Generally **defined** work packages (problems, projects, etc).
(b) Work normally conducted in accordance with **standards**, **codes** and procedures. Work beyond these may be required and may be acceptable given that the candidate demonstrates sound judgement in this regard.
(c) **Problem solving** requiring the use of fundamental principles, underlying techniques and calculations based on formulas.

(d) **Increasing** responsibility and accountability for work and accepted by the Professional Engineering Surveyor in Training.
(e) **Consultation** with relevant people when appropriate.
(f) Tasks/project/activities undertaken become **larger** and **more complex**.
(g) Compliance with **legislation**.
(h) Compliance with the **Code of Conduct**.
(i) **Evaluation** of work by the candidate, supervisor and or client.

3.7. Documentation for the Recording of Training

Documentation is part of the practical training process. As such it is understood that the Engineering Survey Technician is responsible for preparing and keeping documentation that is necessary to manage the training process.

Portfolio of Learning

(a) A portfolio of learning is an individual's record of knowledge and skills acquired during his or her career.
(b) Council does not prescribe documentation for a training programme or that a portfolio is a compulsory part of practical training.
(c) It is recommended that Engineering Survey Technician keep records of their training. An adequately compiled portfolio of learning, kept up to date with ones learning, contains the evidence necessary to submit an application for registration when the required standard is reached.

This makes the preparation of an application for registration far easier than it would be if evidence must be collected some years after the learning took place.

(d) It is strongly recommended that Engineering Survey Technician include the following in their portfolios:

    (i) Copies of training programmes and records of compliance with programmes
    (ii) Records of achievements
    (iii) Assessment results
    (iv) Documentation from supervisors, coaches, assessors and mentors
    (v) Examples or evidence of work done

In addition it is recommended that training and experience reports (as found in the application form for registration, available from PLATO – at www.plato.org.za) are completed and signed by supervisors when relevant sections of work (such as projects) are completed. This will save having to recreate reports and find individuals who can vouch for authenticity some time after the work has been completed.

4. ROLES AND RESPONSIBILITIES

4.1. Project Coordinator

The **Project Coordinator** is responsible for:

- Ensuring that a relevant structured training program is in place
- Compliance with the structured training program by the stream leader

- Compliance with the administrative functions of the stream leader
- Collating and consolidating Graduate Trainees' progress/ reports
- Feedback on training and administrative matters to the Programme Manager
- Quality control on the process.

4.2. Stream Leader

The **Stream Leader** is responsible for:

- The design and review of a relevant structured training program
- Provide the Mentor with a logbook for further distribution to the Graduate Trainee
- Compliance with the structured training program by the mentor
- Compliance with the administrative functions of the mentor
- Regular overall assessments on Graduate Trainees
- Coordinate quarterly probation reports
- Graduate Trainee interventions
- Graduate Trainee rotations
- Feedback on training and administrative matters to the Project Coordinator
- Quality control on structured training programs.

4.3. Mentor

The **Mentor** is responsible for:

- The implementation of a detailed structured training program, attached to time frames
- Provide the Graduate Trainee with a logbook and oversee the proper update thereof
- Compliance with the structured training program by the supervisor
- Assuring that the day-to-day supervision and training is carried out by the supervisor
- Providing guidance and encouragement other than 'day-to-day' supervision and training
- Ensuring that the Graduate Trainee receives fair opportunity to develop
- Acting as a role model
- Quarterly assessments on Graduate Trainees
- Quarterly probation reports
- Signing off of the quarterly technical reports
- Feedback on training and administrative matters to the Stream Leader.
- Being a PLATO Referee.

4.4. The Graduate Trainee (GT)

The **Graduate Trainee** is responsible for:

- Committed and dedicated undertaking of the structured training program;
- Displaying professionalism;
- Register with PLATO as a engineering survey technician and surveyor;
- Acting responsibly in undertaking the structured training;
- Recording and updating daily activities;
- Updating the logbook;

- Submitting on a **quarterly basis** (*no later than **one week** after the relevant quarter*) :
  - Log of detailed exposure (extract of logbook);
  - Summary of workplace exposure (extract of logbook);
  - Evaluation (person & engineering survey);
  - Probation report;
  - Technical report (including feedback on courses attended);
  - PLATO status.

SECTION 2

PERSONAL INFORMATION; SUMMARY OF WORKPLACE EXPOSURE, EVALUATION OF TRAINING & COMMENTS

PERSONAL INFORMATION

SURNAME	
FULL NAMES	
CALL NAME	
RACE	
GENDER	
PERSAL NUMBER	
DATE APPOINTED (as GRADUATE TRAINEE)	
IDENTITY NUMBER	
PLATO NUMBER & DATE OF REGISTRATION	
PHONE NUMBERS **LANDLINE** **MOBILE** **EMAIL**	
POSTAL ADDRESS	
HOME ADDRESS	
NEXT OF KIN: NAME **CONTACT NUMBER**	
WORKPLACE 1 & DATE	
WORKPLACE 2 & DATE	
WORKPLACE 3 & DATE	
WORKPLACE 4 & DATE	
WORKPLACE 5 & DATE	
WORKPLACE 6 & DATE	
WORKPLACE 7 & DATE	
WORKPLACE 8 & DATE	

SUMMARY OF WORKPLACE EXPOSURE

	WORKPLACE & SHORT DESCRIPTION OF RESPONSIBILITY (Categorise from DETAILED LOG – section 3)	PERIOD OF ATTENDANCE (Day, Month & Year)		MONTHS Exposure	AVERAGE RESULT (%) (If applicable)
		FROM	TO		
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
		TOTAL AMOUNT OF MONTHS			

EVALUATION YEAR 1: # 1: PERIOD: JAN – MAR 2012

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 1: # 2: PERIOD: APR – JUN 2012

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……..
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 1: # 3: PERIOD: JUL – SEP 2012

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 1: # 4: PERIOD: OCT – DEC 2012

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

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Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 2: # 5: PERIOD: JAN– MAR 2013

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
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2. Independence					
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4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……. ……

Signature: Mentor / Instructor & Date *Mentor's / Instructor's Surname & Rank & PLATO no*

……. ……

Noted signature Graduate Trainee & Date *Graduate Trainee's Surname & PLATO no.*

EVALUATION YEAR 2: # 6: PERIOD: APR – JUN 2013

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
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General behaviour

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14. Appearance & Dress					
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Workplace exposure

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4. LEVEL OF UNDERSTANDING					
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10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 2: # 7: PERIOD: JUL – SEP 2013

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
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General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
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2. Independence					
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12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
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8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 2: # 8: PERIOD: OCT – DEC 2013

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
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General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
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4. Attendance					
5. Professional Conduct					
6. Driving-force					
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9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
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2. APPLICATION OF SKILLS					
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11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……..
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 3: # 9: PERIOD: JAN – MAR 2014

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 3: # 10: PERIOD: APR – JUN 2014

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 3: # 11: PERIOD: JUL – SEP 2014

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……..
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 3: # 12: PERIOD: OCT – DEC 2014

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 4: # 13: PERIOD: JAN – MAR 2015

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 4: # 14: PERIOD: APR – JUN 2015

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

EVALUATION YEAR 4: # 15: PERIOD: JUL – SEP 2015

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……. ……

Signature: Mentor / Instructor & Date *Mentor's / Instructor's Surname & Rank & PLATO no*

……. ……

Noted signature Graduate Trainee & Date *Graduate Trainee's Surname & PLATO no.*

EVALUATION YEAR 4: # 16: PERIOD: OCT – DEC 2015

Training and workplace exposure

Detail of workplace exposure with reference to the structured training program:

Summary of workplace exposure	Duration (weeks/months)

Evaluation must be conducted in accordance with the following guidelines and rating table:

1	**Poor**	< 40 %	**2**	**Not Satisfactory**	40 – 49 %
3	**Satisfactory**	50 – 59 %	**4**	**Good**	60 – 74 %
5	**Excellent**	75 – 100 %			

General behaviour

EVALUATION: PERSON	TICK THE RELEVANT BOX WITH AN X				
	Poor	**Not-satisfactory**	**Satisfactory**	**Good**	**Excellent**
1. Responsibility					
2. Independence					
3. Voluntary overtime service					
4. Attendance					
5. Professional Conduct					
6. Driving-force					
7. Planning					
8. Thoroughness & Exactness					
9. Purposefulness					
10. Leadership					
11. Enthusiasm					
12. Self-confidence					
13. Friendliness & Helpfulness					
14. Appearance & Dress					
15. Willingness to learn					

Workplace exposure

EVALUATION: ENGINEERING SURVEY WORK	TICK THE RELEVANT BOX WITH AN X				
	Poor	Not satisfactory	Satisfactory	Good	Excellent
1. APPLICATION OF THEORETICAL KNOWLEDGE					
2. APPLICATION OF SKILLS					
3. ORGANISATIONAL ABILITIES					
4. LEVEL OF UNDERSTANDING					
5. ACCURACY OF CALCULATIONS					
6. PROBLEM SOLVING ABILITIES					
7. PRODUCTIVITY					
8. GROWTH					
9. LEVEL OF RESPONSIBILITY AND ACCOUNTABILITY (as Technician)					
10. OVERALL PERFORMANCE					
11. OVERALL RATING (General behaviour & Workplace exposure)					

Comments
Mentor / Instructor:

……
Signature: Mentor / Instructor & Date

……
Mentor's / Instructor's Surname & Rank & PLATO no

……
Noted signature Graduate Trainee & Date

……
Graduate Trainee's Surname & PLATO no.

SECTION 3

DETAILED LOG OF EXPOSURE

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

LEARNING ACADEMY

DETAILED LOG OF WORKPLACE 1

Initials & Surname	
Mentor	
Placement Office	

Date	Type of exposure	Duration	%
2 – 5 Apr07	Induction course	1 week	n/a
7- 11 May07	Example: Survey: Level the Boskop road.	1 week	n/a
14 – 25 May07	Example: Construction: Check the bending schedules of the Nandoni WTW	2 weeks	n/a
21 – 31 May07	Example: Drawing: De Hoop outlet works, detail of …..	2 weeks	n/a
4 – 8 Jun 07	Example: Hydrology: Current gauging course at Boskop	1 week	65%

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

LEARNING ACADEMY

DETAILED LOG OF WORKPLACE 2

Initials & Surname	
Mentor	
Placement Office	

Date	Type of exposure	Duration	%

water affairs
Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

LEARNING ACADEMY

DETAILED LOG OF WORKPLACE 3

Initials & Surname	
Mentor	
Placement Office	

Date	Type of exposure	Duration	%

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

LEARNING ACADEMY

DETAILED LOG OF WORKPLACE 4

Initials & Surname	
Mentor	
Placement Office	

Date	Type of exposure	Duration	%

SECTION 4

PROBATION REPORTS

water affairs

Department:
Water Affairs
REPUBLIC OF SOUTH AFRICA

PROBATION ASSESSMENT INSTRUMENT FOR NON-SMS MEMBERS
LEVEL 1 - 12

C O N F I D E N T I A L

Period under review:

Surname and initials:

Job title/Rank:

Remuneration level:

Persal no:

Component:

Date of appointment to current remuneration level: Age

Designated group

African	Coloured	Male	Disabled
☐	☐	☐	☐
Indian	**White**	**Female**	
☐	☐	☐	

Probation	Extended probation	Permanent	Contract
☐	☐	☐	☐

PART 1 – PERFORMANCE APPRAISAL

Standard Rating Schedule for Key Performance Areas:

Term	Description
Level 5: Outstanding performance	Performance far exceeds the standard expected of a member at this level. The appraisal indicates that the member has achieved above fully effective results against all performance criteria and indicators as specified in the Work plan and maintained this in all areas of responsibility throughout the year.
Level 4: Performance significantly above expectations	Performance is significantly higher than the standard expected in the job. The appraisal indicates that the member has achieved above fully effective results against more than half of the performance criteria and indicators and fully achieved all others throughout the year.
Level 3: Fully effective	Performance fully meets the standard expected in all areas of the job. The review/assessment indicates that the member has achieved fully effective results against all the performance criteria and indicators as specified in the Work plan.
Level 2: Performance not fully effective	Performance is below the standard required for the job in key areas. Performance meets some of the standards expected for the job. The review/assessment indicates that the member has achieved below fully effective results against more than half the key performance criteria and indicators as specified in the Work plan
Level 1: Unacceptable performance	Performance does not meet the standard expected for the job. The review/assessment indicates that the member has achieved below fully effective results against almost all of the performance criteria and indicators as specified in the Work plan. The member has failed to demonstrate the commitment or ability to bring performance up to the level expected in the job despite management efforts to encourage improvement.

PART 2 – SELF ASSESSMENT REPORT (To be completed by Employee)

2.1 Key Result Areas

Key Performance Area	Outputs	Outputs Achieved	Outputs not Achieved

2.2 Behavioural Assessment by Supervisor

Insert X in appropriate column	**Satisfactory**	**Unsatisfactory**	(xi) Is the officer in your view placed correctly? If not, what do you propose? …… …… …… ……
(i) Attendance			
(ii) Zeal			
(iii) Thoroughness			
(iv) Willingness to learn			
(v) Conduct			
(vi) Friendliness and helpfulness			(xii) Do you anticipate that the officer upon expiry of his/her probationary period will be suitable for a permanent appointment? …… …… ……
(vii) General progress			
(viii) Language proficiency measured against post requirements			
(ix) Sobriety			
(x) Appearance and dress			

PART 3 - DEVELOPMENT, TRAINING, COACHING, GUIDANCE AND EXPOSURE NEEDED BY THE EMPLOYEE

(To be completed by Supervisor in consultation with the employee)

SIGNATURE EMPLOYEE: _____ SIGNATURE SUPERVISOR: _____

DATE: _____ DATE: _____

PART 4 - CONFIRMATION/ EXTENSION/ TERMINATION OF PROBATION

EMPLOYEE'S COMMENTS:

_____

_____

_____

_____

EMPLOYEE SIGNATURE:_____

SUPERVISOR COMMENTS:

_____

_____

_____

_____

1. I recommend the confirmation of the probation of Mr/Mrs _____ in view of the member's diligence and as his/her conduct has been uniformly satisfactory.

OR

2. I recommend that the probation of Mr/Ms _____ be extended for a period of _____ months for the reasons/comments noted above.

OR

3. I recommend that _____ probation be terminated for the reasons/comments noted above.

----------	----------	----------
Signature	**Name**	**Date**

SECTION 5

DETAILED STRUCTURED TRAINING PROGRAM

5.1. GENERAL

- ✓ ***Computer skills (Word/ Excel/ Outlook/ PowerPoint)***
- ✓ ***Customer Care***
- ✓ ***Environmental Management***
- ✓ ***Financial management***
- ✓ ***Induction to DWA,***
- ✓ ***Meeting procedures, Minutes & Agendas***
- ✓ ***Mentorship***
- ✓ ***Occupation, Health & Safety***
- ✓ ***Planning of tasks***
- ✓ ***Presentation skills***
- ✓ ***Procurement of Goods & Services***
- ✓ ***Management Principles***
- ✓ ***Written communication:***
  - ➢ ***Letters/ Memos***
  - ➢ ***Reports***

SOFTSKILL TIMING MATRIX

	Year 1	Year 2	Year 3	Year 4
Induction to DWA	X			
Computer skills	X			
Presentation skills	X			
Written communication	X			
Mentorship	X			
Procurement of Goods & Services		X		
Meeting procedures, Minutes & Agendas		X		
Management Principles			X	
Occupation, Health & Safety			X	
Customer Care			X	
Financial management				X
Environmental Management				X

5.2. ENGINEERING/CONSTRUCTION SURVEYS

- ✓ ***Levelling and Construction Survey***
  - ➢ ***Levelling***
  - ➢ ***Setting out of a structure (Collimation and intermediate methods) with the help of a level and measuring tape***
  - ➢ ***Measuring of longitudinal and cross sections using the reciprocating and concurrent techniques***
  - ➢ ***Profile measuring***
- ✓ ***Structural deflection determinations***
- ✓ ***Setting out works for road, railways, sewer, bridge and other construction works***
- ✓ ***Monitoring of excavations for large buildings and the subsequent control of the building operations***
- ✓ ***Three-dimensional surveys of buildings.***
- ✓ ***Surveys of quarries***
- ✓ ***Determination of quantities and volumes***

5.3. HYDROGRAPHIC SURVEYS

- ✓ ***Ship to shore activities***
- ✓ ***Electronic measurements using primary and secondary radar techniques***
- ✓ ***Profiling by means of three dimensional fixing***
- ✓ ***Establishment of tide gauges***
- ✓ ***Systematic recording of tidal movements and wave action***
- ✓ ***Coastal and sedimentation surveys***

5.4. CONTROL SURVEYS (MANDATORY)

- ✓ ***Static GPS***
- ✓ ***Triangulation***
  - ➢ ***Intersection***
  - ➢ ***Resection***
  - ➢ ***Trilateration***
  - ➢ ***Eccentric***
- ✓ ***GPS RTK***
- ✓ ***Precise Levelling***
- ✓ ***EDM Traversing***
- ✓ ***Trig Heighting***

5.5. CADASTRAL SURVEYS

5.6. GEOMATICS (MANDATORY 30 DAYS)

- ✓ ***Geographical or Land Information Systems***

5.7. TOPOGRAPHICAL SURVEYS (MANDATORY)

- ✓ ***Aerial Surveys Fieldwork***
- ✓ ***Detail Surveying using Total Stations***
- ✓ ***Detail Surveying using GPS (RTK)***

SECTION 6

ANNEXURE A: SURVEYORS (ENGINEERING) NOTES

THE SOUTH AFRICAN COUNCIL FOR PROFESSIONAL AND TECHNICAL SURVEYORS

GENERAL INFORMATION AND PROCEDURE FOR THE REGISTRATION OF TECHNICAL SURVEYORS IN THE ENGINEERING CATEGORY

These notes provide details on HOW to apply for registration and WHAT happens once an application has been lodged. Candidates can also obtain advice and assistance from the PLATO Registrar, their university supervisor and representatives from SAGI.

Information on registration with PLATO, including relative application forms, fees and details for Trial Surveys, will usually be given to students at first registration at a University of Technology

The importance of maintaining a continuous log book of ALL surveying activities, up to registration as a Surveyor, cannot be over emphasised.

1.ENGINEERING SURVEY TECHNICIAN-IN-TRAINING

1.1 *General*

1.1.1 There are no academic or technical requirements for registration as an Engineering Survey Technician-in-Training.

1.1.2 It is normal to register as an Engineering Survey Technician-in-Training when commencing studies at a UoT and this form of registration is necessary before an Engineering Surveyor or a Professional Surveyor can employ a candidate in order to provide practical experience.

1.2 *Requirements*

1.2.1 The relevant application form completed before a Commissioner of Oaths.

1.3 *Procedure*

1.3.1 Submit the application form to the Registrar with the prescribed registration fee.

1.3.2 The Registrar will notify the candidate when he or she has been registered.

2.REGISTRATION AS AN ENGINEERING SURVEY TECHNICIAN

2.1 *General*

2.1.1 After passing a recognised examination (usually the National Diploma : Surveying) and completing a suitable period of training, a trial survey and a law examination, a candidate may apply to be registered as an Engineering Survey Technician.

2.1.2 An Survey Technician (Engineering) may describe himself or herself as such, use the appropriate letters ST after his or her name BUT may only work under the personal supervision of a suitably qualified person.

2.2 *Requirements*

2.2.1 Certified copy of the National Diploma : Surveying or an equivalent recognised by the Education Advisory Committee.

2.2.2 Certificate to the effect that the experiential training by the candidate had been approved by the UoT and/or certificates from suitably qualified persons covering the required training.

2.2.3 Certificate from a UoT indicating that a trial survey or equivalent practical test has been completed.

2.2.4 A law examination as outlined in Section 6.

2.2.5 The relevant application form completed before a Commissioner of Oaths.

2.3 *Procedure*

2.3.1 Submit the application form to the Registrar with the prescribed application fee.

2.3.2 The Registrar informs the candidate of the date and venue of the law exam.

2.3.3 If the application is successful, the Registrar notifies the candidate and sends him or her an Oath/Affirmation form for completion and submission with the relevant registration form noting the fees required.

3.REGISTRATION AS AN ENGINEERING SURVEYOR

3.1 *GENERAL*

3.1.1 After being registered as an Engineering Survey Technician and acquiring a minimum of three (3) years approved practical experience, a candidate may apply to be registered as an Engineering Surveyor.

3.1.2 The scrutinising process that follows will involve a personal oral examination and probably a trial survey. This will be followed by a Law examination.

3.1.3 An Engineering Surveyor may describe him or herself as such, use the appropriate letters S after his or her name and work unsupervised. He or she may also supervise and certify the work of Engineering Survey Technicians.

3.2 *REQUIREMENTS.*

3.2.1 A certified copy of the National Diploma : Surveying (or an equivalent).

3.2.2 Full details of experience in the form of two (2) copies of the Survey Log Books and/or Schedules of Experience certified by a Commissioner of Oaths.

3.2.3 A law examination as outlined in Section 6.

3.2.4 The relevant application form completed before a Commissioner of Oaths.

3.3 *PROCEDURE.*

3.3.1 An application form to register as an Engineering Surveyor to be submitted to the Registrar with the prescribed application fee.

3.3.2 The Registrar forwards the application to the Convenor of the Technical Registration Committee who will evaluate the experience.

3.3.3 The candidate will be notified of the date, time and place for an oral examination by the Technical Registration Committee.

3.3.4 This oral examination will test his or her overall grasp of a broad range of surveying knowledge and practice and assess the candidate's ability to recognise, define and solve practical problems. It will also probe the candidate's powers of effective communication and seek an awareness of the role and responsibilities that surveyors have in society.

3.3.5 Once the candidate has passed the oral examination/trial survey, he/she will be advised by the Registrar and he/she may then apply to write the next Law exam.

Candidates are advised to bring a portfolio of current work to the oral examination with statements or references from persons who have supervised the candidates work.

Candidates may offer at the oral examination examples of specific completed projects in lieu of a Trial Survey. A careful perusal of the Notes for Guidance for Technical Surveyors will give an idea of the standard that is expected.

3.3.6 Should there be any doubt with regard to the candidate's ability or level of competence, the Technical Registration Committee will set a **Trial Survey** on any one, or a combination of the following surveying aspects:

Triangulation network for tunnel alignment
Three dimensional monitoring of structures
Metrological surveying (Measurements in an industrial environment)
Hydrographical surveying
Photogrammetry
Cadastral surveying
Engineering surveying and/or Construction surveying
GIS and/or Spatial data management.

The candidate will be notified by the Convenor of Technical Registration Committees of the exact task and requirements for a Trial Survey and will be given supporting data and documentation where relevant.

The Trial Survey, which typically takes two weeks to complete, must be finalised within three months and all surveying records, calculations and reports returned to the Convenor for evaluation.

3.3.7 If considered necessary, the candidate will be notified of the date, time and place of a second oral examination for re-evaluation by the Technical Registration Committee.

3.3.8 When scrutinising is complete the Convenor notifies the Registrar of the decision and returns all documents. The Convenor also issues a certificate certifying that the candidate has passed, failed or been exempted from the Trial Survey.

3.3.9 The Registrar notifies the candidate of the outcome of the application and, if successful, sends the relevant registration form and Oath/Affirmation form for completion and submission for registration together with the required fee.

3.3.10 If the application is not successful, the candidate may re-apply, but only after the passage of six months. New application fees are then payable.

NOTES FOR GUIDANCE FOR REGISTRATION AS AN ENGINEERING SURVEYOR OR ENGINEERING SURVEY TECHNICIAN

1.INTRODUCTION

These notes which have been approved by the South African Council for Professional and Technical Surveyors, have been compiled with a view to assisting students at UoT who intend qualifying for registration as Engineering surveyors in terms of the Professional and Technical Surveyor's Act, 40/1984. Adherence to the requirements as set out below, will assist materially in avoiding unnecessary delays.

DEFINITION

The "Council" means the South African Council for Professional and Technical Surveyors established in terms of Act 40 of 1984, or such agent acting on its behalf.

2.STATUTORY REQUIREMENTS

2.1 A candidate who wishes to register as an Engineering Survey Technician should normally first register in terms of Section 23 of the Act as an Engineering Survey Technician-In-Training, but may, after obtaining a diploma in surveying at a South African UoT, or its equivalent as certified by the Council, apply for registration as an Engineering Survey Technician if he or she has complied with the requirements of Section 22(1)(b)(ii), (iii) and (iv) of the Act.

2.2 A candidate who wishes to register as an Engineering Surveyor must normally first register in terms of Section 22(1)(b) of the Act as an Engineering Survey Technician and after completing the training as prescribed in the Rules may apply for registration as an Engineering Surveyor if he or she has complied with the requirements of Section 22(1)(a)(iii) and (iv) of the Act.

2.3 A candidate who wishes to qualify for registration as an Engineering Survey Technician and who will be entitled to carry on his calling under the personal supervision of a professional surveyor, engineering surveyor or other suitably qualified person, shall undergo the practical training as set out in Paragraph 3 and carry out an oral examination, trial survey or such practical tests as are determined by the Council.

2.4 A candidate who wishes to qualify for registration as an Engineering Surveyor and who will be entitled to carry on his/her calling without supervision, shall undergo the training as set out in Paragraph 4 of these notes and undertake an oral examination and Trial Survey. If successful he or she will then apply to write the Law examination.

2.5 A candidate who wishes to qualify for registration as an Engineering Survey Technician or Engineering Surveyor, as the case may be, and who has, prior to the commencement of the Act, undergone training in the form of practical experience contemplated in Paragraphs 3 and 4 must submit an application to the Council in terms of Paragraph 6. Where it is not possible to obtain certificates of employment or submit exact schedules of training and experience an affidavit detailing all such training and experience, may be acceptable.

3. TRAINING FOR REGISTRATION AS AN ENGINEERING SURVEY TECHNICIAN IN THE REGISTER AS PROVIDED FOR BY SECTION 7(4)(B) OF ACT NO. 40 OF 1984.

3.1 *Period of Training*

3.1.1 The period of practical training required in terms of the Rules is 240 working days (2 semesters) and the nature of such training shall be as set out in Paragraph 3.2 and is controlled by the Council. A training certificate issued by the UoT is required.

3.1.2 In the case of "other" qualifications, approved by the Council, it may be expected of the candidate to undertake a trial survey and/or undergo a personal oral examination.

3.2 *Nature of Training*

3.2.1 Training must be varied and can include cadastral, engineering/construction, topographical, control surveys, hydrographic surveys, and photogrammetric surveys. The work must be undertaken under the personal supervision of a professional surveyor or engineering surveyor registered in terms of the Act, or such other person whom the Council considers suitable.

3.2.2 *COMPULSORY TRAINING*

80 working days in basic survey which comprises:

	TYPE OF SURVEY	WORKING DAYS
1	**TRIANGULATION:** By angular measurement; By distance measurement; By GPS, where applicable.	20
2	**LEVELLING:** Spirit levelling; Precise levelling; Trigonometric levelling; Heighting by GPS where applicable; Adjustment of a levelling network.	15
3	**TRAVERSING:** Using total stations or EDM equipment; Checked by GPS, if equipment available.	15
4	**TOPOGRAPHICAL SURVEYING** Detail surveying by total station, GPS or traditional methods.	10
5	**COMPUTER DATA PROCESSING**	10
6	**PRECISE ENGINEERING SURVEYS**	5
7	**PHOTOGRAMMETRIC FIELD WORK** Annotation; Design and identification of photo control.	5
	TOTAL	80

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.

3.2.3 *Additional Training*

Not less than 160 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:

3.2.3.1 **Cadastral Surveys** with a Professional Land Surveyor, government department or an organisation doing such work.

3.2.3.2 **Control Surveys** with a Professional Surveyor, Engineering Surveyor, a government department or an organisation doing such work.

3.2.3.3 **Topographical Surveys** with an aerial survey firm, Professional Surveyor, Engineering Surveyor, government department or a firm doing similar work.

3.2.3.4 **Engineering/Construction 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.

3.2.3.5 **Hydrographic Surveys** with a government department, the Hydrographic Survey of the Navy or any other operation or firm undertaking such work.

3.2.4 The following should be noted:

3.2.4.1 The number of working days quoted in Paragraphs 3.2.2 and 3.2.3 includes both office and field work and will be recorded on the official diary form.

3.2.4.2 The ratio of office to field work should not exceed 2:1 and should include calculations, draughting and normal administrative operations.

3.2.4.3 A detailed day to day diary of all survey work undertaken during the training period shall be kept and must be submitted with each application.

3.2.4.4 Experience in the various fields of survey shall not be one-sided and must include adequate training in levelling, triangulation and traverse work.

3.3 Where training in the form of practical experience has been undertaken prior to the commencement of the Act the provisions of Paragraphs 3.2.2 and 3.2.3 shall be used to assess the practical survey work performed in terms of Section 22(1) (b)(ii) of the Act by a candidate whose diploma or equivalent qualification has been recognised.

4. TRAINING IN THE FORM OF PRACTICAL EXPERIENCE FOR REGISTRATION AS AN ENGINEERING SURVEYOR IN THE REGISTER PROVIDED FOR BY SECTION 7(4)(B) OF ACT NO. 40 OF 1984.

4.1 The period of training in the form of practical experience as prescribed in the Rules is three (3) years after completion of the diploma or degree and including a mandatory period of 30 days in Geomatics. The nature of such training and experience is as set out in Paragraphs 4.2, 4.3, 4.4, 4.5, 4.6, 4.7 and 4.8 and is controlled by the Council.

Any candidate wishing to register as an Engineering Surveyor would normally be registered as an Engineering Survey Technician during most of his or her years of practical training.

On completion of the three years practical training it will be expected of the candidate to write an examination on the laws that are related to surveying and undertake an oral Examination/Trial Survey to the satisfaction of the Council.

4.2 The major proportion of work undertaken during this period must be in at least three of the types of surveys listed in Paragraph 3.2.3 and must include experience in each of the options in Paragraphs 3.2.3.3 and 3.2.3.4. The experience must be varied and be obtained working with or for the individuals or organisation mentioned in Paragraph 3.2.3. The results of these surveys will not be readily available to the Council, and the candidate will have to submit a detailed report on each major undertaking, together with his Schedule of Work as required in Paragraph 5.

4.3 For the purpose of Paragraph 3.2.3.1, Cadastral Surveys include all office work normally undertaken prior to the approval of survey records by the Surveyor-General.

4.4 The work undertaken for Topographical Surveys should, in addition to ground surveys, include Aerial Surveys that involve planning of aerial photography, identification and fixing of photo control, annotation, compilation and final checking.

4.5 For Engineering/Construction Surveys the work should include structural deflection determinations, setting out works for road, railways, sewer, bridge and other construction works, the monitoring of excavations for large buildings and the subsequent control of the building operations; three-dimensional surveys of buildings; surveys of quarries; determination of quantities and volumes; and all other extensive engineering works. It should be noted that levelling and contour surveys of an elementary nature will not be accepted as adequate training and experience.

4.6 For Hydrographic Surveys the work should cover a reasonable amount of ship to shore activities and include electronic measurements using primary and secondary radar techniques; profiling by means of three dimensional fixing; establishment of tide gauges; systematic recording of tidal movements and wave action; as well as coastal and sedimentation surveys. The candidate must have a basic knowledge of underwater acoustics, be familiar with echo sounding and be capable of calibrating an echo sounder.

4.7 It is recognised that for any Cadastral, Topographical, Engineering or Hydrographic Survey a certain amount of Control Survey is required, and this sort of survey work can be included under Control Surveys in the schedule, provided the standard of accuracy of such work is equal to or better than Class A as defined in Regulation 11(1) of the Survey Regulations framed in terms of the Land Survey Act, No 8 of 1997.

4.8 A minimum of 30 days of training is required in the area of Geomatics with specific reference to spatial data management. This may include the use and application of Geographical or Land Information Systems as well as the capture, display, manipulation and delivery of spatial information in a digital form. The training may be with a Professional Surveyor, Professional Engineer, Engineering Surveyor, company, government department, local authority, or an organisation doing such work.

4.9 When training in the form of practical experience has been undertaken prior to the commencement of the Act, the provisions of Paragraph 4.2 shall not necessarily apply but shall be used to assess the practical survey work performed in terms of Section 22(1)(a)(ii) of the Act by a candidate who has completed more than six (6) years of training in the form of practical experience and whose diploma or equivalent qualification has been recognised.

5. TRAINING AND/OR EXPERIENCE SCHEDULE FOR CANDIDATES WISHING

TO QUALIFY AS ENGINEERING SURVEY TECHNICIANS AND ENGINEERING SURVEYORS.

When applying to the Council for registration, the candidate shall supply a Training Diary and/or Experience Schedule as an extract from the diary and prepared in the form of the attached specimen. This schedule must be compiled in chronological order and each page must be signed by the supervisor, with whom the candidate has trained, as well as the candidate.

6.LAW EXAMINATION FOR SURVEY TECHNICIANS AND ENGINEERING SURVEYORS

6.1 A candidate who wishes to register as Survey Technician or Engineering Surveyor must apply to the Registrar to write a Law examination after he/she has completed the oral examination / trial survey.

6.2 Law examinations are scheduled to take place twice annually, usually **in March and November**, at the offices of the Surveyors-General.

6.3 The candidate will be expected to have a comprehensive knowledge of the laws relating to registration of surveyors and the survey and registration of land. He or she should also be acquainted with certain aspects of related legislation as set out in the list below.

6.4 The law examination consists of one or two written papers as outlined below.
The pass mark is 65%.

The papers will consist of questions on the Acts outlined in the following schedule.

6.5 The Registrar will notify the candidate of a pass or failure.

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SECTION 7

SUPPORTING DOCUMENTS