



The South African Council for Professional and Technical Surveyors

Die Suid-Afrikaanse Raad vir Professionele en Teaniese Opmeters

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(STANDARD ENTRY)

**NOTES FOR GUIDANCE FOR
REGISTRATION AS A GEO-INFORMATION
SCIENCE (GISc) TECHNICIAN.**

INTRODUCTION

These notes, which have been approved by the Geo-Information Society of South Africa (GISSA) and the South African Council for Professional and Technical Surveyors (PLATO), have been compiled with a view to assisting persons who intend qualifying for registration as GISc Technician in terms of the Professional and Technical Surveyors Act, [Act 40/1984].

Adherence to the requirements as set out below, will assist materially in avoiding unnecessary delays.

Definitions

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

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

“GISSA” refers to the Geo-Information Society of South Africa.

“NQF” National Qualification Framework as defined by SAQA.

“SAQA” The South African Qualification Authority.

“US” Unit standards, used to define modules of NQF GISc qualifications.

“GISc” Geo-Information Science refers to the science and technology of collection, measuring, processing, analysing, displaying interpreting, disseminating, utilising, evaluating and managing-geographically related and spatially referenced information

“Mentor” refers to a practising, registered Professional GISc Practitioner or GISc Technologist who act as guide and advisor to young entrants to the profession

.STATUTORY REQUIREMENTS

A candidate who wishes to register as a GISc Technician should normally first register in terms of Section 23 of the Act as a GISc Technician-in-Training. A candidate may, after obtaining a recognised degree, diploma or NQF level 5 GISc Qualification or an equivalent qualification approved by Council, apply for registration as a GISc Technician subject to the requirements of Section 22[1][b][ii], [iii] and [iv] of the Act.

A candidate who wishes to qualify for registration as a GISc Technician and who will be entitled to carry on his/her calling under the personal supervision of a Professional GISc Practitioner, GISc Technologist or other suitably qualified person, shall undergo the practical training as set out in Paragraph 3 and carry out a practical test as determined by the Council.

A candidate who wishes to qualify for registration as a GISc Technician 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 5. 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.

.TRAINING IN THE FORM OF PRACTICAL EXPERIENCE

Period of Training

Period of practical training required in terms of the Rules is 220 working days and the nature of such training shall be as set out in Paragraph 3.2 and is controlled by the Council. A training certificate is required. For a qualification issued by an educational institution, the educational institution will normally issue a certificate in respect of the training, provided the candidate is registered as a GISc Technician-in-Training.

In the case of "other" qualifications, approved by the Council, it may be expected of the candidate to undertake a practical test and/or undergo a personal interview.

.Nature of Training

Training must be varied covering a wide range of work in GISc, and can also include surveying, remote sensing, land use and environmental studies and other relevant applications of spatial information. The work must be undertaken under the personal supervision of a Professional GISc Practitioner or GISc Technologist registered in terms of the Act, or such other person whom the Council considers suitable.

.Compulsory Training

80 Working days in GISc which comprises.

	TYPE OF WORK	WORKING DAYS
i	IT SKILLS: This includes standard operating system skills; working in a networked environment with centralised servers and printers; working with spreadsheet software, GIS software and e-mail software.	10
ii	DATA COLLECTION AND CAPTURE: This includes digitising from map compilation or ortho-images; data capture from co-ordinates or general plans; metadata capture and maintenance; map projections and re-projections. This may also include field recording of data by direct observation and by annotation of aerial photography and satellite imagery,	15
iii	DATA MANIPULATION: This includes data processing; transformations; spatial data cleaning; data editing; attribute data cleaning; basic data classification; capture and metadata maintenance; map projections and re-projections; working with database files; performing queries; data integration merging, splitting and aggregations.	15
iv	REPRODUCTION PROCEDURES: This includes the reproduction of prints by multi-colour printing on different output devices and other methods of output.	5
v	SPATIAL MODELLING: This includes working with different data models; feature classifications and definitions, design of symbology types, styles and colour.	20
vi	MAP PRODUCTION: This includes map production and report writing. Both vector and raster data to be included.	15
	TOTAL	80

.Additional Training

Not less than 140 working days in the following types of work, of which not less than 10 days or more than 100 days in any one category can be included, with the provision that work in at least three of the categories must be included:

- a) IT Skills development (Additional to the above)
- b) Data Collection and Capture and Processing (Additional to the above)
- c) Data Manipulation (Additional to the above)
- d) Spatial Modelling (Additional to the above)
- e) Photogrammetric Compilation
- f) Image Processing
- g) Map Production (Additional to the above)

.The following should be noted:

The number of working days quoted in Paragraphs 3.3 and 3.4 includes both office and field work, of which not more than 10% may be field work.

A detailed day to day diary of all work undertaken during the training period shall be kept and may be called for by the Council.

Experience in the various fields of work shall not be one-sided and must include adequate training in all aspects of the work.

Where training in the form of practical experience has been undertaken prior to the commencement of the Act the provisions of Paragraphs 3.3 and 3.4 shall be used to assess the practical work performed in terms of Section 22[1][b][ii] of the Act by a candidate whose qualification has been recognised.

.Training Schedule

When applying to the Council for registration, the candidate shall supply a Training 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 mentor with whom the candidate has trained, and by the candidate.

4. LAW EXAMINATION FOR GISc TECHNICIANS.

4.1 A candidate who wishes to register as GIS Technician must apply to the Registrar to write a Law examination.

4.2 Law examinations can be written in most centres at least twice a year.

Candidates will be notified of the time and venue for each examination.

4.3 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.

4.4 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.

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

5. APPLICATION FOR PRACTICAL TEST

When the candidate is of the opinion that he or she has met the requirements set out in Paragraph 3, he or she should apply to the Council for registration in the relevant category.

The application must be accompanied by:

- a) An application form and the relevant fee;
- b) The Schedule of Training referred to in Paragraph 3.6;
- c) A certified copy of his or her applicable qualification/s; and
- d) A Certificate of Employment as prescribed in the Rules. A separate Certificate of Employment is required in respect of each mentor with whom the candidate has served.

“Certified” means certified to be a true copy by a Commissioner of Oaths or a Justice of the Peace.

The practical test may consist of one or more of the following:

- a) Data capture
- b) Data editing
- c) Data manipulation
- d) Map production
- e) Spatial modelling

A full report dealing with all the aspects of the practical test and other relevant information must be submitted.

This practical test will normally have been completed at a PLATO approved educational institution by PLATO qualified personnel. The educational institution will have issued a certificate to this effect.

6. COMPLETION OF REGISTRATION PROCEDURE

Evaluation of the practical test will take place as soon as possible after completion of the work. The candidate will be informed of the time, date and place of an interview, if required. The examining body will certify the acceptance of the practical test..

The Registrar will notify the candidate that he or she complies with the requirements of Section 22[1][b][i], [ii] and [iii] of Act No. 40 for 1984 and will request him or her to make [in terms of Section 22[1][b][iv] of the Act] an oath or affirmation in relation to his or her calling. The relevant registration fees will also be required.

When these formalities have been completed the candidate will be registered as a GISc Technician with the Council.

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