

TUTORIAL PROPOSAL FOR AfricaGEO 2018, to be held 17-19 September 2019

Title of the Tutorial

Challenges in the Geomatics Profession: Registration, accreditation and self-assessment

Tutorial Organisers

Dr Heindrich du Plessis

Chairperson of the Education Advisory Committee, SAGC

Email: dupfam@iafrica.com Tel: +27 76 296 0330

Sanet Carow

Lecturer: Department of Geography, Science Campus, UNISA

Email: sanetpc@unisa.ac.za Tel +27 11 471 2011

Scope and Topic of the workshop

The South African Geomatics Council (SAGC) receives complaints from the public from time to time about registered and unregistered geomatics practitioners. Most of these complaints deal with unprofessional conduct of practitioners. However the office of the Registrar of the SAGC also receives complaints from practitioners who are denied registration in more than one branch of geomatics. Most of these complaints deal with inappropriate or non-accredited qualifications.

It is clear that applicants don't always understand the different academic and skills requirements relating to different specialisation (branches) in the geomatics field. Traditionally a person with a BSc Land Surveying was allowed to practice across different applications in the surveying field i.e. Cadastral, Engineering and Photogrammetric (Aerial) surveying. That expectation still exists today regardless of new legislation, regulations and advances in technology. The consequence is that geomatics practitioners today require specialised knowledge and skills to meet the expectations of clients or employers. This cannot be achieved via a generic type of qualification. Consequently the profession is looking at alternative post graduate qualifications that will enable practitioners to register in more than one branch.

Institutions of Higher Education offering specialised programmes in geomatics are subjected to both a self review and a subsequent accreditation process by the Council for Higher Education (CHE) in cooperation with the respective Professional Body (SAGC). Institutions of Higher Education as well as applicants with a non accredited qualification has access to a Self-assessment Tool (SaT) to assist them during their self review for compliance with the SAGC academic requirements. The SAGC and CHE follow exactly the same process and criteria during accreditation visits to Institutions of Higher Education. CHE is responsible for the Sub Framework dealing with accreditation and re-accreditation. During the past three years CHE, SAQA and DHET has engaged extensively with stakeholder including professional bodies during the development of this framework and other changes in policies regulating the Higher Education environment. It is important to share these changes with academia and practitioners.

The objective of this tutorial is to explain to the audience the assessment and subsequent registration procedures that follow an application to register with the SAGC, secondly to explain the changes in accreditation and re-accreditation procedures and thirdly to explain the use of the SaT during the self review process of Institutions of Higher Education as well as for applicants with non-accredited qualifications to demonstrate how the tool can assist them to identify weaknesses or gaps in their qualifications. The tutorial will end with a short report back on the progress made with the development of post graduate qualifications that can be offered using distance learning methodologies to accumulate credits through short courses (extended CPD courses) that may lead to post graduate qualifications or to address gaps in existing qualifications.

Rationale (max 1 page)

- **Why is the topic current and important?**

The tutorial is motivated by the need of the geomatics profession, industry and academia to be better informed on the registration including dual registration, accreditation as well as re-accreditation, SaT and solutions offered to address academic shortcomings in the geomatics field.

- **Why the tutorial may attract a significant number of submissions of good quality?**

We do not ask for submissions. Attendees are invited to attend and take part in the discussions

- **Why the workshop may attract a large number of attendees, in addition to the authors?**

Anecdotal evidence suggest that there are a number of potential candidates who needs assistance with the registration process. Current candidates can take part in the discussion on changes in accreditation and re-accreditation procedures.

- **Why the workshop differs from others; i.e., related workshops and conferences of similar topic?**

The industry will have the opportunity to pose questions directly to the relevant stakeholders. It is a practical problem solving tutorial.

Biography of the speakers

Dr Heinrich du Plessis completed his PhD at University Stellenbosch (December 2014). He currently manages his own practice specializing in capacity building in geomatics with special attention to the rural development areas of South Africa. Working with various institutions of higher education in South Africa, he developed GISc programmes for accreditation with the SAGC and CHET to be offered through distance learning. He serves on the National Treasury's Integrated Skills Development Grant (ISDG) Steering Committee, LGSETA Discretionary Grant Steering Committee and as the LGSETA/SAGI project manager. In this regard he manages 12 mentors and is responsible for the work based learning of geomatics candidates while administering a number of bursaries. He is an immediate past Vice President of PLATO, member of the SAGC and Chairperson of the

Education Advisory Committee, Facilitator of the Geomatics Accreditation Panel, convener of the GISc assessment sub-committee and member of the Survey assessment sub-committee. In recognition of his contributions towards the development of geomatics in South Africa, Heindrich was rewarded with life membership of both SAGI and GISSA.

Prof Kethamonie Naidoo, Director Accreditation, Council on Higher Education

Sanet Carow is a lecturer in Geographical Information Science at Unisa. She has more than 15 years' experience in teaching at a tertiary education institution and more than 2 years' experience in a management position. Her current responsibilities include lecturing a NQF level 7 module and developing new modules in GIS. Sanet holds a MSc(Geoinformatics) at the University of Pretoria. Research interests include the complementary use of GIS and artificial intelligence in decision making and the use and GIS education in other African countries with specific focus on tertiary institutions and Geography/GIS education in secondary schools in South Africa.

Prof Serena Coetzee is Director of the Centre for Geoinformation Science (CGIS) at the University of Pretoria in South Africa. Her research focuses on the ever-increasing volumes of geographic information and the challenges of making these available, accessible and usable. Specific interests are spatial data infrastructures, address data, standards, open principles, geoinformatics education and geovisualization. Serena is actively involved in standardization through ISO/TC 211, Geographic Information/Geomatics, and the local South African mirror committee. She currently chairs the CSI subcommittee on Education and Training.

Assoc. Prof. Dr Julian Smith completed his BSc (survey) degree at UCT in 1993 and continued with postgraduate studies at the same university. His research involved the application of digital photogrammetric mapping technologies in deep level mining. In 1997 he graduated with a PhD having submitted a thesis entitled "Three Dimensional Measurement of Textured Surfaces using Digital Photogrammetric Techniques".

In 1998 Dr Smit left academia and took up the management of an aerial survey company, specialising in photogrammetric map production and Geographic Information Systems (GIS). During the course of 2003, he started a photogrammetry, remote sensing and GIS Company specialising in environmental and land management (AfriMap Geo-Information Services CC).

Dr Smit joined the Division of Geomatics (School of Architecture, Planning and Geomatics) in January 2006 as a senior lecturer and was promoted to Associate Professor in 2011. His research interests are in the application of GIS, Remote Sensing and Photogrammetric technologies in the area of environmental and land management.

Dr Smit is registered in three professional categories with the South African Geomatics Council (Professional Engineering Surveyor / professional Photogrammetric Surveyor / Professional geoinformation Science Practitioner) and is a Member of Council (SAGC). He is also a Member of the South African Council for Spatial Information (CSI) and the South African representative to the International Society for Photogrammetry and Remote Sensing (ISPRS).

Time line:

Anticipated time line for the offering of the tutorial is 1 hour 50 minutes and will be offered as follows.

Presenter: Dr. Heindrich du Plessis 20 minutes:

1. SAGC Assessment and Registration procedures

Presenter: Prof. Kethamonie Naidoo (Director Accreditation CHE) 20 Minutes:

2. Accreditation and re-accreditation of Institutions of Higher Education

Presenter: Sanet Carow 20 minutes:

3. Explaining the application and correct use of the SaT

Presenter: Prof. Serena Coetzee and Prof. Julian Smit 30 minutes:

4. Solutions to address the academic shortcomings in the geomatics field for dual registration and or upgrading registration levels. Progress in the development of academic modules for distance learning.

Panel discussion: 20 minutes

Questions and answers.