Applied Geo Info Ltd
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Short Courses Announcement

Introduction

The Applied Geo Info Ltd (AGI Ltd) offers two kinds of programs: **The Stationary Mode** and T**he Mobile Mode**. For the **Stationary Mode** programmes the participant must travel to Dodoma to attend the course at our offices located at **Atman Inn near Dodoma Airport** along the Singida-Dodoma-Dar Es Salaam Road just off the double lane road to CCM HQ. For the Mobile GIS programmes the AGI Ltd trainers will carry out the training at the clients location or designated venue using our M**obile GIS Laboratory**.

The Mobile GIS laboratory mode is best suited for LGA's, Central Government and Private Companies that cannot afford to let their staff travel to the training venue in Dodoma. The Mobile GIS Laboratory offers the possibility for on the job training and evening courses conducted at the clients site or within the clients office vicinity.

TARGET GROUPS FOR THE AGI GEOINFORMATICS COURSES

Participants in the AGI Ltd courses include practitioners in the fields of Governance (Policy, Planning and Decision Making), Land Administration and Conflict Studies, Education, Management, Health, Environment, Natural Resources, Geoscience, Statistics, Mathematics, Geography, Engineering, Mapping, Cartography, Physical Planning and Architecture, Regional Planning, Social Scientists and Researchers, Public health, Resource Assessment and allied professions. AGI Ltd also provides training for the special niche of policy development, spatial development planning and spatial decision making (SDM) using geoinformation and geoinformatics tools. The special case of practicing professionals dealing with the built environment (Land Economists, Urban and Regional Planners, Architects and Building Economists, Land Surveyors and Geomaticians; Land Developers and Environmental Engineers) are particularly encouraged to apply for the AGI Ltd Geoinformatics courses.

AGI Ltd also offers tailor made specific courses upon a clients request and specification.

COURSE DURATION

AGI Ltd offers five types of courses 1) One week executive courses 2) Two week introductory courses for practising professionals 3) Three week introductory courses for the general clientèle 4) Two week advanced refresher courses for mid-carrier professionals 5) Three week Intermediate or Advanced courses for practising professionals.

COURSE DELIVERY MODE

All courses consist of lectures (theory) followed by intensive practical exercises and an individual or group project of a duration commensurate with the course duration. Individual and group home works are evaluated and marked for assessment purposes. All three week courses have a final evaluated and marked based on a one week individual project assignment.

COURSE AWARD

AGI Ltd offers a certificate of attendance with attached transcript of the participants performance for each type of course. Each three week course is eligible for academic unit transfer towards modular certificate, diploma or degree requirements.

DEADLINE FOR APPLICATION:

Applications must be submitted to AGI Ltd one month before the commencement of the course.

COURSE VENUE:

The course venue is dependent on whether the client has opted for the stationary mode or mobile mode option.

APPLICATION MODALITIES

Applicants may apply by email (mtalo@agi.biz.tc or agi@agi.biz.tc or eg_mtalo@yahoo.com) or fill and submit application forms downloadable from the AGI Ltd Website (http//:agi.biz.tc). To encourage diversity women applicants receive a tuition fee discount of 5%!

SUBSISTENCE, TRAVEL AND COMPUTING EXPENSES

The tuition fees for each course do not cover subsistence allowance or costs for travel to and from the AGI Offices in Dodoma or venue where the course will be organized. The AGI Ltd can be consulted for appropriate transport, meal allowances and accommodation expenses, however these expenses are in addition to the tuition fees and they must be paid by the client organisation or the participant. The AGI Ltd can procure affordable Laptops or Note books for the participant's home work use at the clients expense but requests for this service must be made at least two months in advance of the date of course offerings.

SPONSORSHIP

AGI Ltd is not a sponsoring agent. Participants must cover all expenses on their own or seek sponsorship from their employers or other sources.

Short Courses Schedule for 2011

No.	Course Title	Fees	Indicative Dates (2011)
1.	GIS for Urban Water Supply and Sanitation Applications	1,000,000TSh	1th - 14th November
2.	GIS for Strategic Planning and Decision Support	2,000,000 TSh	24th - 29th October
3.	Application of GIS and Remote Sensing for Mid-carrier Engineering and Land Development Professionals	1,200,000 TSh	14th Nov. - 9th December
4.	Formalization and Regularization of Informal Settlements Using Geoinformation Technology	1,200,000 TSh	5th December– 24th December 2011
5.	GIS for Solid Waste Management	1,500,000 TShs	2nd January - 22th January 2012
6.	GIS for Housing Estate Development and Management	1,800,000 TShs	23rd January - 12th January 2012
7.	GIS and Remote Sensing for Land Management and Land Administration	1,800,000 Tshs	13th January - 4th February 2012

NOTE: The proposed dates are indicative. They may change depending on specific client demands and number of applicants for each course. Applied Geo Info Ltd can also put up tailor made courses based on clients specifications.

Detailed Description of the Courses

1. GIS for Urban Water Supply and Sanitation Applications - (3 weeks)

Target Group: Water Supply and Sanitation Professionals and Technical workers

Course objectives

- To broaden and enhance the understanding of the role of geoinformation in water and sanitation systems design and management.
- To explore the use of GIS analysis techniques in linking water and sanitation related problems with public health conditions.
- To improve the water and sanitation engineers and workers ability to conceptualize, design, implement and manage water supply and sanitation projects using GIS tools.
- To develop an understanding of the role of information and geoinformation in particular in formulating water and sanitation development plans and making strategic decisions
- To share professional and practical experiences gained from bad and good practices i.e. real life projects and recent geoinformatics research finding

Course structure

This course shall comprise three modules. The **first one week module** constitutes lectures on GIS principles and GIS tools. The **second one week module** provides hands on review by participants of technical issues and legal requirements for planning and designing water supply and sanitation systems. It also introduces participants to problem analysis and structuring for GIS based solutions. Candidates are also encouraged to review traditional planning and design approaches and make comparisons with the GIS-based approaches. The **third one week module** focuses on GIS based solutions of practical water supply and sanitation planning and monitoring problems. Participants apply the lessons gained in the first two modules to develop a solution to individual or group marked projects.

2. GIS for Strategic Planning and Decision Support - (1 weeks)

Target Group: Senior and Mid-level Administrators and Policy Makers

Course objectives

Strategic planning is the core tool for an effective development and management of an organization's business and resources. This course is directed at managers, senior planners, professional practitioners and consultants interested in exploring the use of geoinformation technology and tools for strategic planning and decision support. The specific objectives of the course are to:

- Provide a forum for group review of corporate planning and governance models;
- Impart knowledge and skills for structured problem analysis for GIS based planning and decision making;
- Review the role of geoinformation in informing and directing the strategic planning and decision making process;
- Review the role of GIS tools in enabling evidence based policy development and decision making process;
- Provide hands-on experience in the use of GIS tools to help policy developers and decision

makers to pose the right questions and generate the right information for informed policy development, planning and decision making.

Course structure

The course includes the following modules.

First Module (1 day): Group review of corporate planning and decision making. including basic principles, introduction to planning, ground work for planning, regular planning processes, strategic planning tools overview, Introduction to Spatial Decision Support Systems (SDSS). Examples of GIS based planning and decision support.

Second Module (3 days): Use of GIS in Planning, Monitoring and Evaluation. This module will provide an overview and basic principles of GIS based planning, monitoring and evaluation – including data and information requirements and data sources for GIS-based methods. GIS-based analysis techniques. Introduction to the use of GIS analysis tools to support multi-criteria analysis for complex problem solving and decision making.

Third Module (1 day): Practical hands-on exercises. Use of GIS tools by participants to support planning and decision making.

3. Application of GIS and Remote Sensing for Mid-carrier Engineering and Land Development Professionals - (3 weeks)

Target Group Mid-carrier Technical Professionals

Course objective

To impart knowledge and skills related to the application of GIS and Remote Sensing Techniques in human settlements development projects. The focus is on GIS data management including analysis, retrival and presentation.

Course structure

The course shall comprise three parts.

The **first part** comprises lectures on the fundamentals of GIS, Remote Sensing, aerial photography and photogrammetry. The techniques of imagery and photo-interpretation and other remote sensing techniques will be covered. The **second part** concentrates on practical training in the interpretation of imagery and aerial photographs and extraction of GIS information layers. The **third part** deals with the application of specific GIS software including Arc View, ArchGIS, and Public Domain GIS Software, in relation to digital data entry and storage, processing and analysis, display and retrieval.

Participants will work on a one week individual project relevant to a specific application area.

4. Formalization and Regularization of Informal Settlements Using Geoinformation Technology - (3 weeks)

Target Group: Mid-carrier professionals in the Lands Development and Administration Sector

Course objectives

- To provide a forum for exploring new approaches to Land Administration and Land Management using Geoinformation technology

- To enhance theoretical, technical knowledge and practical skills related to regularization and formalisation of informal settlements using geoinformatic approaches.
- To impart among the participants GIS knowledge and skills required for setting up and operating GIS-based land information systems.
- To develop knowledge and skills for structural analysis of land governance problems and problem solving using GIS and Remote Sensing Tools.
- To develop knowledge and skills for posing the right questions and obtaining solutions using GIS analysis.

Course structure

This course consists of three modules. The **first module** reviews theories and concepts related to informal land and property ownership practices and the data and information needs for urban regularisation or formalisation schemes.

The **second module** provides an overview on GIS and Remote Sensing approaches to monitoring and reporting the growth of informal settlements. Participants will explore and compare traditional approaches to urban development monitoring with GIS and Remote Sensing approaches. Geomatics and geoinformatic tools and methods for mapping informal settlements will also be introduced. Participants will also be exposed to studies in the recently regularized informal settlements in Dodoma and Dar Es Salaam and Mbozi district.

The **third module will** offer the participants an opportunity to define, structurally analyse and develop a GIS and Remote Sensing solution to a practical land regularisation and formalisation problem.

5. GIS for Solid and Liquid Waste Management - (3 weeks)

Target Group: Local Government and Municipal Professionals and Technical Section Heads

Course Objectives

The course will provide a forum for exploring innovations and imparting knowledge and skills in GIS based municipal governance and it is designed to:

- Impart GIS knowledge and skills to Municipal decision makers and Technocrats for innovative Solid and Liquid Waste Management (SLWM);
- Develop skills for structured SLWM problem analysis and solution using geoinformation technology
- Provide hands-on experience in the use of GIS tools to help decision makers to pose the right questions and generate the right information for informed urban solid and liquid waste management.

Course Modules:

First Module: Overview of GIS and Remote Sensing data and information for solid and liquid waste management (SLWM) including generation, Collection, Removal and Dumping aspects.

Introduction to GIS and Remote sensing techniques.

Second Module: Remote sensing for SLWM related urban mapping. GIS for visualisation and mapping of SLWM infrastructure. GIS-based SLWM network analysis – including shortest path analysis and scheduling.

Third Module: GPS-based mapping of collection sites and dumping sites; Practical GIS based planning of collection points and disposal sites. Practical GIS-based Multi-criteria analysis applications for ideal land fill or dumping site selection.

6. GIS for Housing Estate Development and Management - (3 weeks)

Target Groups: Public and Private Housing Corporations. Municipal officers involved in land development management. Mid-carrier professionals in the housing sector.

Course objectives

This course is designed to bring to the housing market GIS and Remote Sensing approaches for sustainable housing. One of its goals is to empower the housing professionals in the local government and private sector to acquire GIS and Remote Sensing skills required to improve urban housing governance. In particular this course aims to provide an opportunity to professionals, policy makers and others involved in the improvement and delivery of housing to:

- Acquire knowledge and skills for geoinformation-based design of innovative policies and intervention strategies related to planning, development, monitoring and decision making aspects of urban housing;
- Use GIS tools to study the interplay between socio-economic, political and spatial contexts of urban housing delivery in Tanzania
- Acquire knowledge on the spatial information needs for housing policy development and effective housing delivery and management.
- Provide hands-on experience in the use of GIS tools to help housing professionals and managers to pose the right questions and generate the right information for informed urban housing governance.

Course structure

The course consists of the following modules.

Module One: Group discussion on the needs and demand for housing including legal, economic and spatial location contexts of housing.

Module Two: Introduction to GIS and Remote Sensing Techniques for Housing Information delivery. Covers theories and practice.

Module Three: Structured Housing problem analysis for GIS based solutions. This includes principles of GIS-based market analysis and housing estate site selection. Participants will get an opportunity to define and solve specific problems using GIS and Remote Sensing tools.

7. GIS and Remote Sensing for Land Management and Land Administration - (3 weeks)

Target Group: Policy makers, Decision makers and Professionals in the Lands Sector

Course objectives

Weaknesses in effective land administration function in any country generally leads to poorly defined land rights and this in turn generates opportunities for corrupt land administration practices. As a result many countries are faced with increasing frequency of serious land conflicts when the rights of individuals and communities are violated by a few unscrupulous individuals. Transparency in land administration is a critical factor and a precondition for enhanced good land governance because it eliminates corruption in land administration, however transparency cannot be guaranteed when land owners are not properly documented or when the rights they enjoy over a piece of land are not properly accounted for. The objectives of this course are:

- To equip those involved with land administration with strategies for collecting, processing, managing and disseminating spatial information on land parcels and the bundles of rights associated with those land parcels as a strategy for insuring tenure security and guaranteeing transparency in land administration;
- To bring to the participants' awareness and understanding the role of geoinformation technology in improving land administration and ameliorating land conflicts;
- To develop among the participants knowledge and practical skills for using geoinformation software and hardware tools in their day to day activities of land administration.
- To equip central and local government officials with the tools needed to generate policy goals, choose appropriate land development strategies, monitor policy and development strategy impacts and make informed decisions on land development and land administration options.

Course structure

This course comprises of three parts.

The **first part** addresses the concepts and processes of land administration from a geoinformation technological perspective. Participants will be introduced to the theory and principles of GIS and Remote Sensing for Land Administration.

The **second part** covers advanced GIS and Remote Sensing concepts. Participants will obtain skills and knowledge required to determine GIS and Remote Sensing data needs for effective land administration. Sample case studies will be presented from Tanzania and the SADC region. The concepts of the GIS driven land cadastre will be presented.

The **third part** provides hands-on skills for solving land administration problems using GIS and Remote Sensing Tools.

Annex I: Payment Arrangements

MODE OF PAYMENT

Payments can be made through the following modes:

A. **CHEQUE OR CASH**

Cheque (made out to Applied Geo Info Ltd)

Cash (Transferred by TT to the Applied Geo Info Ltd – see Bank Particulars Below)

B. **DEPOSIT INTO BANK ACCOUNT**

Account Name: Applied Geo Info Ltd

Bank: CRDB Azikiwe

Account Number: 01j1027770600

Further information Contact

The Managing Director,

Attn: Training Coordinator,

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