

REGIONAL CENTRE FOR TRAINING IN AEROSPACE SURVEYS (RECTAS)
(Under the auspices of the United Nations Economic Commission for Africa - UNECA)



www.rectas.org

RECTAS was officially opened on 21st October 1972. The Centre is bilingual, with English and French as official languages. The Institution was established under the auspices of the UN Economic Commission for Africa to conduct training and research in an African environment in the field of Aerospace Surveys and Geo-informatics. RECTAS is a joint Institution of African Countries; the participating countries at the moment are eight (8): Benin, Burkina, Cameroon, Ghana, Mali, Niger, Nigeria (host country) and Senegal. The following is a summary of the currently available education and training programmes at the institution.

(A) INTERNATIONAL MSC IN GEOINFORMATICS
RECTAS Ile-Ife, Nigeria and ITC Enschede, The Netherlands

It is an established fact that all sectors of human development can benefit from the applications of advanced Geoinformation technology (GIT) in the production, management, dissemination and use of geospatial data and resources. The major problem is the difficulty (both financial and otherwise) in accessing qualitative and relevant knowledge in this field to booster effective inventory and decision making for sustainable development in Africa. An effective strategy to combat this deficiency has been put in place by RECTAS, in collaboration with a world renowned institution - The International Institute for Geo-Information Science and Earth Observation (ITC), The Netherlands - to provide African professionals with up to date quality Geoinformatics education at convenient location and at a reasonable cost through post graduate (PGD and MSc) level courses.



Implementation Format and Duration

The program commences on 1st September every year and consists of 23 modules of three weeks per module with a total duration of 18 months. The implementation is in four phases as indicated in the following table with the first phase designed such that course participants attend the first 10 modules in RECTAS and the remaining at ITC. In subsequent phases, more modules will then be added to the RECTAS component until 2010 when the entire programme will be run at RECTAS. All the courses taken at RECTAS are the same in content and quality with those taken at ITC.

Phase	Period	RECTAS Modules	ITC Modules
One	2004 -2006	1-10 (7.5 Months)	11 – 23 (10.5 Months)
Two	2007- 2008	1 – 13 (10.5 Months)	14 – 23 (7.5 Months)
Three	2009 – 2010	1 – 11 including thesis defence (15 months)	12 – 15 (3 Months)
Four	2010 Onward	Whole program runs at RECTAS (18 months)	Quality control & staff exchange.

Period and Location	Topics
September – April; RECTAS, Nigeria	In-depth skills in Principles of Databases, GIS and Remote Sensing. Exposure is provided to a variety of applications of Geoinformatics in diverse fields of human endeavours and hands on experiences with African related examples. Proposals for M.Sc thesis proposal is developed during this time
May – March; ITC, The Netherlands	Participants join a larger community of international students in Enschede to improve on Geoinformatics skills, participation in more international utilization of Geo-information Science and Earth Observation. M.Sc thesis is carried out.

Course Fees Profile for RECTAS/ITC M.Sc

Phase	Tuition Fee (EURO)	Additional Costs (EURO)	Allowance & Accommodation (EURO)	Air Ticket	Total Cost (EURO)
1	4650	2915	8025	1100	16690
2	4350	4300	6194	1100	15944
3	3000	4125	6350	1100	14575
4	2700	2565	1126	-	6401



Picture showing two graduating ITC-RECTAS MSc Geoinformatics Course Participants during their graduation at ITC in April 2007

(B) DIPLOMA PROGRAMMES IN GEO-INFORMATION PRODUCTION AND MANAGEMENT

The Centre runs three diploma level programmes in Geoinformation Production and Management, namely:

- 1) Post Graduate Diploma (GPM3), 12 months duration, starting 1st

September every year

- 2) Technologist Diploma (GPM4), 18 months duration starting 1st March of every odd number year
- 3) Technician Diploma (GPM5), 18 months duration starting 1st March of every odd number year.

The three diploma programmes are bilingual with English stream and French stream. For each programme, Course participants can specialize in any of the following three options: (i) Photogrammetry and Remote Sensing, (ii) GIS and (iii) Cartography. The programmes are designed in modules each of 3 weeks duration, which gives opportunity for career officers to join selected modules of interest as short courses.

The three diploma programmes support both residential and non-residential participants. The Residential program is for participants who are on full scholarships or are able to pay the full residential course fees as indicated in the following table. Residential participants enjoy such facilities as free accommodation, monthly stipend, book allowance, free health care and other benefits. The non-residential course participants will pay only tuition fee and are therefore not entitled to Centre's accommodation and other afore-mentioned benefits.

Programme	Course Fee Residential*	Course Fee Non-Residential*
GPM3	\$3075.00	\$800.00
GPM4	\$4650.00	\$1150.00
GPM5	\$4650.00	\$1150.00

* Fees are payable in Naira, US \$ or CFA Francs at the prevailing exchange rate



ADMISSION REQUIREMENTS:

ITC/RECTAS M.Sc: At least first degree (B. Sc) with Second Class Lower in relevant disciplines. Proficiency in English is mandatory. Application closes 1st May.

PGD/GPM3: First degree (B. Sc) or equivalent qualification in relevant field. Application closes 1st May

GPM4: GCE A/L with 2 credits in cognate subjects including mathematics **OR** Upper Credit Technician or National Diploma in geo-related disciplines with at least 2

years of post qualification experience. Application closes 1st November of even number years.

GPM5: GCE O/L or its equivalent with at least a pass in English language and credits in 4 other subjects which must include Mathematics, Physics, Additional (Further) Mathematics, Chemistry, Geography, Biology, Agricultural Science, Technical Drawing or Economics. Application closes 1st November of even number years.

Application Forms: Forms can be downloaded from the RECTAS website www.rectas.org, to be completed and returned to the Secretary, Admissions Committee in hard copies.

(C) RECTAS – OAU MASTERS PROGRAMMES IN REMOTE SENSING AND GIS

RECTAS in collaboration with the Department of Geography, Obafemi Awolowo University (OAU) offers two Masters programmes in Remote Sensing and GIS, namely

- Master of Science (MSc), duration of minimum of 2 semesters and maximum of 4 semesters
- Master of Remote Sensing and GIS, duration of minimum of 2 semesters and maximum of 3 semesters.

Eligibility

The course is opened to Graduates of disciplines in Social Sciences, Sciences, Technology and others who may require expertise in Remote Sensing and GIS, with at least a first degree with Second Class Division.

Course Fees

The tuition fees is 70,000 Naira per session (subject to change without notice)

(D) SHORT COURSES

In addition to the following scheduled short courses, the Centre can organise customised short-term courses on demand which can be run either in RECTAS or in the client's premises.

COURSE TITLE	COURSE OBJECTIVES	REQUIREMENT	PERIOD
Advanced Certificate in Computer Applications	To update the skills/Knowledge of participants in Information and Communication Technology (ICT) and Operating Systems, Computer Programming, Networking, World Wide Web (WWW), etc.	PGD or B. Sc. in GI related disciplines.	September of every year.
Advanced Certificate in Database Systems	Principles of databases (design, querying and updating of databases) including spatial data organisation.	As above.	October of every year.
Advanced Certificate in Geoinformatics	Overview of spatial data collection systems, GIS and Cartography; information extraction from images; alternative production processes for generating spatial information products.	As above.	October of every year.
Advanced Certificate in GIS.	User requirements for spatial databases; design of spatial databases and applications, selection of appropriate database management and GIS software tools; implementation and maintenance of spatial databases and applications.	As above.	November of every year.
Advanced Certificate in Remote Sensing.	Concepts and techniques for primary data acquisition; concepts and techniques for image	As above.	December of every year.

	enhancement, image orientation and aerotriangulation, DTM & ortho-image production and topographic and thematic information extraction including quality control.		
Advanced Certificate in Cartography.	Principles of cartographic design, generalisation and production management in both topographic and thematic mapping environments leading to both screen display and hard copies, including web cartography.	As above.	February of every year.
Advanced Certificate in Geo-information Production Systems.	Knowledge and skills on methods, techniques and tools for the development and operational management of integrated GI production systems, including Spatial Data Infrastructure (SDI).	As above.	February/ March of every year.
Intermediate Certificate in Computer Applications.	Basic knowledge/skills in Computer programming, operating systems, Internet applications, etc.	HND or Technologist diploma in any related discipline.	April of every odd number year.
Intermediate Certificate in Spatial data Acquisition Techniques.	Basic practical skills, as well as familiarity with concepts and processes related to the spatial data acquisition from images including Global Positioning Systems.	As above.	July of every odd number year.
Intermediate Certificate in Image processing & Interpretation.	Practical training needed to work with different types of remotely sensed images, including skills in visual interpretation and feature extraction.	As above.	August of every odd number year.
Intermediate Certificate in Digital Mapping.	Practical training needed to work with map information stored and displayed on computer. Capability in digitising and scanning techniques.	As above.	September of every odd number year.
Intermediate Certificate in Cartography.	Cartographic visualisation of GI by means of screen displays, hard copies, or on the web.	As above.	October of every odd number year.
Intermediate Certificate in GIS.	Design and implementation of GIS for various applications.	As above.	November of every odd number year.
Certificate in Computer Applications.	Basic skills in computers, operating systems, and common application software packages.	ND/ Technician diploma or equivalent in related discipline.	May of every odd number year.
Certificate in Database management Systems.	Basic knowledge in working with spatially related databases using database management software packages.	As above.	June of every odd number year.
Certificate in Photogrammetry and Remote Sensing.	Basic practical training in photogrammetry and remote sensing techniques.	As above.	July of every odd number year.
Certificate in Spatial Data Conversion	Conversion of analogue spatial data into digital format through scanning, on-screen and table digitising including editing for further applications.	As above.	August of every odd number year.
Certificate in GIS.	Basic concepts of GIS, scanning, digitizing, linking of geometric and attribute data, and basic spatial analysis.	As above.	September of every odd number year.
Certificate in Cartography.	Basic concepts of digital cartographic operations including visualisation by screen displays and hard copies.	As above.	October of every odd number year.

Course duration: 3 weeks per course.

Course fee (Tuition only): \$150.00 (payable in Naira at UNDP rate).

For further details please contact:

The Executive Director,

Regional Centre for Training in Aerospace Surveys (RECTAS),

Off Road 1, Obafemi Awolowo University Campus, P. M .B. 5545, Ile-Ife, Nigeria.

E-mail: info@rectas.org or rectasinfo@yahoo.com ; Website: www.rectas.org

Telephone: (234) (0) 8033840581 or (234) (0) 8076145344