ITU Centres of Excellence Network for Arab Region

Centre International des Technologies de l'Environnement de Tunis (CITET)

Face-to-Face Training on
"Applications of GIS in Environmental Management and Resources Protection"
Tunis - Tunisia, 25-28 November 2019

COURSE OUTLINE

COURSE DESCRIPTION

Title	Application of GIS in environmental management and resources protection
Objectives	1. To introduce GIS and Remote Sensing in environmental management 2. To expose participants to data capture, input, manipulation and display by GIS 3. To expose participants to applications of GIS and remote sensing in environmental management 4. To familiarize with different methods and techniques for Spatial Analysis 5. Understanding the role played by technical experts, stakeholders and decision-makers 6. To demonstrate to participants the use of GIS in identifying and analyzing potential impacts 7. To present case studies
Date	25 - 28 November 2019
Duration	4 Days
Registration deadline	**15 November 2019**
Training fees	**400 USD**
Course code	**19WS24266ARB-E**

LEARNING OUTCOMES

This training aims at providing the participants with extensive insights of using the Geographic information System "GIS" in environmental management and resources protection.

At the end of the training, participants will be able to:

- Understand fundamental concepts and practices of Geographic Information Systems (GIS)
- Apply basic GIS functionalities.
- Demonstrate organizational skills in file and database management.
- Apply GIS analysis to address geospatial problems and/or research.
- Demonstrate proficiency in the use of GIS tools to create maps.
- Demonstrate confidence in undertaking new analysis using GIS
- Give examples of interdisciplinary applications of Geospatial Information in relation with Environment.

TARGET POPULATION

The training targets engineers, technicians, managers in the Ministries of Information Technology and Communications (ICT), Ministries of Environments, ICT regulators, private sector officers working in the environment issues. Other institutions and individuals who are interested in having an overview of Geographic Information Systems (GIS) are also welcome to participate in this training course.

TUTORS/INSTRUCTORS

NAME OF TUTOR(S)/INSTRUCTOR(S)	CONTACT DETAILS
Mr. Lotfi LAMTI	Mail: lotfi.lamti@gmail.com Mobile: (+216) 22 789 705

EVALUATION

There will be a pre-assessment test to evaluate the prior knowledge of the participants (30 minutes test). There will daily short quizzes (10 minutes – 10 questions) at the end of each day to measure the progress of knowledge acquisition.

There will be a final test (MCQ of 50 different questions – 1 hour).
A Final Report will be drawn up stressing out the progress of knowledge acquisition for each participant.

TRAINING SCHEDULE AND CONTENTS / AGENDA

Date for 1st day	Time	Topics/Activities
25/11/2019	08:00 - 08:30	Registration
	09:00 - 10:30	Brief welcome and overview of the session Team presentation CHAP 1 : Introduction to GIS and remote sensing in Sensing in environmental management - Knowledge recap: environmental sustainability and GIS.
	10:30 - 11:00	Coffee break
	11:00 - 12:00	Introduction to GIS software (Open Source, Desktop and Web based)
	12:00 - 13:00	CHAP 2 : Geospatial technologies and techniques for environmental mapping - Components of GIS - GIS Data sources for environmental management,
	13:00 - 14:00	Lunch Break
	14:00 - 15:30	- Working with GIS data - Rasterization and vectorization - Projection and coordinate system
	15:30 - 16:00	Coffee break
	16:00 - 17:00	- GPS data collection for environmental management - GIS data collection using mobile devices
Date for 2nd day	**Time**	**Topics/Activities**
26/11/2019	09:00 - 10:30	- Data output / Data presentation - Relating information from different sources
	10:30 - 11:00	Coffee break
	11:00 - 12:00	- GIS database creation - Map preparation and presentation
	12:00 - 13:00	Basic GIS functionalities requesting data
	13:00 - 14:00	Lunch break
	14:00 -15:30	Working on produced data
	15:30 -16:00	Coffee break
	16:00 -17:00	Making cartographic outputs

Date for 3rd day	Time	Topics/Activities
27/11/2019	09:00 - 12:00	CHAP 3 : GIS as a tool for spatial Analysis - Spatial and attributes Request - Site location - Land use/Land Suitability analysis
	10:30 - 11:00	Coffee break
	11:00 - 12:00	Distance to areas of population
	12:00 - 13:00	Local area demographics/ Proximity to transport and road infrastructure
	13:00 - 14:00	Lunch break
	14:00 -15:30	Environmentally sensitive areas
	15:30 -16:00	Coffee break
	16:00 -17:00	Spatial Multi-Criteria Decision Analysis using GIS Methodological steps in MCA and Spatial Analysis
Date for 4th day	Time	Topics/Activities
28/11/2019	09:00 - 10:30	CHAP 3 : Use of GIS and Remote sensing to identify and analyze potential impacts
	10:30 - 11:00	Coffee break
	11:00 - 12:00	- Introduction to monitoring and change detection - Geographic Data for Environmental Modeling and Assessment
	12:00 - 13:00	Open Source web based resources such for decision support in environmental management
	13:00 - 14:00	Lunch break
	14:00 - 15:30	Case studies
	15:30 - 16:00	Coffee break
	16:00 - 16:30	Case studies
	16:00 - 17:00	Final evaluation and closing ceremony

METHODOLOGY

- The training will be presented mainly in the form of group workshops and exercises.
- There will also be interactive instructor-led presentations.
- Practical situations, real examples and case studies will be presented and discussed.
- An electronic support of the training content will be distributed by e-mailing.
- Daily assessments will be made to monitor progress.
- Daily pre-start refresher quizzes with competition between groups.
- Mindmapping.

COURSE COORDINATION

TRAINING COORDINATOR	**ITU COORDINATOR**
Mr. Jawhar Abdelkrim CITET Tel: +216 71 206 766 Mobile: +216 20 489 942 Fax: +216 71 206 642 Email: financement@citet.nat.tn formation@citet.nat.tn	**Eng. Mustafa Al Mahdi** Programme Administrator Arab Regional Office-ITU Tel: +202 35371777 Mobile: +201141177573 Fax: +202 35371888 Email: mustafa-ahmed.al-mahdi@itu.int

REGISTRATION AND PAYMENT

ITU Academy portal account

Registration and payment should be made online at the ITU Academy portal.

To be able to register for the course you MUST first create an account in the ITU Academy portal at the following address:

https://academy.itu.int/index.php/user/register

Training registration

When you have an existing account or created a new account, you can register for the course online at the following link https://academy.itu.int/training-courses/full-catalogue/application-geographic-information-system-gis-environmental-management-and-resources-protection-0

You can also register by finding your desired course in our training catalogue https://academy.itu.int/index.php/training-courses/full-catalogue

Payment

1. On-line payment

A training fee of USD 400 per participant is applied for this training. Payments should be made via the online system using the link mentioned above for training registration at https://academy.itu.int/training-courses/full-catalogue/application-geographic-information-system-gis-environmental-management-and-resources-protection-0

2. Payment by bank transfer

Where it is not possible to make payment via the online system, select the option for offline payment to generate an invoice using the same link as above. Download the invoice to make a bank transfer to the ITU bank account shown below. Then send the proof of payment/copy of bank transfer slip and the invoice copy to Hcbmail@itu.int and copy the course coordinator. All bank transaction fees must be borne by the payer.

Failure to submit the above documents may result in the applicant not being registered for the training.

3. Group payment

Institutional Contacts are users that represent an organization. Any student can request to be an institutional contact or to belong to any existing organization.

To do this, head to your profile page by clicking on the **"My account"** button in the user menu. At the bottom of this page you should see two buttons:

a. If you want to **become an institutional contact**, click on the "**Apply to be an Institutional Contact"** button. This will redirect you to a small form that will ask for the organization name. After you fill the name of the organization you want to represent, click on **"continue"** and a request will be created. An ITU Academy manager will manually review this request and accept or deny it accordingly.

b. If you want to **belong to an existing organization**, click on the **"Request to belong to an Institutional Contact"** button. This will redirect you to a small form that will ask you to select the organization you want to join from an organization list. After you select the correct organization, click on **"continue"**, a request will then be created. The Institutional Contact that represents that organization will manually accept or deny your request to join the organization.

ITU BANK ACCOUNT DETAILS:	
Name and Address of Bank:	UBS Switzerland AG Case postale 2600 CH 1211 Geneva 2 Switzerland
Beneficiary:	Union Internationale des Télécommunications
Account number:	240-C8108252.2 (USD)
Swift:	UBSWCHZH80A
IBAN	CH54 0024 0240 C810 8252 2
Amount:	USD 400
Payment Reference:	CoE-ARB 24266-WBS No. P.40592.1.08

4. Other method of payment

If due to national regulations, there are restrictions that do not allow the payment to be made using options 1 & 2 above, please contact the ITU Coordinator for further assistance.