United Nations Institute for Training and Research

Unitar Online Catalogue

Geo-Information in Disaster Situations - 4th Edition

Deadline: 1 Jan 2014

Type:	Course
Location:	Geneva, Switzerland
Date:	26 Mar 2014 to 15 Apr 2014
Duration:	3 Weeks
Programme Area:	Satellite Imagery and Analysis
Website:	http://www.unitar.org/unosat
Price:	$0.00
Event Focal Point Email:	unosat@unitar.org
Partnership:	University of Copenhagen

BACKGROUND

An emergency becomes a disaster when it exceeds the capability of the local resources to manage it. With ever increasing population and housing densities, the world continues to experience ever increasing danger and damages from natural and manmade disasters. Deaths, injuries, and loss of property will increase around the world due to disasters, unless changes are made in the manner we respond to disasters. Effective disaster management and response demand rapid utilization of information and data from many sources.

Visualization and spatial applications are critical during pre and post-disaster management and response. The ability to seamlessly integrate and distribute digital data into spatially explicit forms for situation /rapid assessment and analysis during and after a disaster remains a challenge.

To meet this challenge UNOSAT is offering a course on integrated approach on how info management and sharing is enhanced by use of GIS tools in disaster situations. GIS database can be accessed for damage assessment or to locate critical infrastructure. Since there will always be a disaster and to give an overview of the situation it becomes important for disaster managers to get equipped with these basic tools. On completion of the course, students will be able to critically analyse the prerequisites and challenges for effective situation/rapid maps and preliminary damage analysis. This could include identifying, collecting, preparing, analysing and creating maps which will match the needs arising from anticipated future disasters.

EVENT OBJECTIVES

The aim of the course is to prepare the students so that they are able to work with basic GIS tools in preparation of disaster related maps in support of emergency response operations. Provide a foundation for students interested in research to be used as a base for their research on GIS in disaster Management cycle.

LEARNING OBJECTIVES

Upon completion of the course, the participants will be able to:

- Define and describe basic concepts and terminology related to geospatial information technology.
- Apply basic methods and functionalities of GIS software (ESRI ArcGIS) to manage and analyse spatial data.
- Explain the role of Geo-information in the response phase of a disaster.
- Undertake the process of map-making in support of emergency response operations.

- Identify, search, collect, organize and analyse geospatial related information including GIS data.
- Apply basic GIS methodologies to perform impact analysis and preliminary damage assessment in the immediate aftermath of a disaster.

CONTENT AND STRUCTURE

The course is focused on providing insight into various tools available in GIS for situation mapping. Focus is given to understand the concept of GIS and its integration in disaster situations. A central part of the course is the case which involves collecting information and GIS data from web sources, preparing, and analysing and creating situation maps to support emergency response. Hands on experience with the Field data collection tools like GPS, PDA will also be part of the course. Students during GIS lab exercises will work with the real case datasets from past disasters throughout the major part of the course.

The course is divided into 15 Modules. Each module is structured into 4 sessions of 1.5 hours each, which make a workload of 6 hours on average per day and, an overall workload of 90 hours for the entire duration of the course.

METHODOLOGY

Full time lectures and practical exercises in the GIS lab. The course includes a few days of individual or group study. There will also be visit field visits to various UN organizations in and around Geneva.

TARGETED AUDIENCE

The applicants live up to the Master of Disaster Management admission criteria.

Participants taking the course must have:

- A Bachelors degree in a relevant field (e.g. engineering, medicine, social sciences, science, journalism, etc.) or an equivalent qualification from a recognized higher education institution;
- Atleast two years of work experince;
- A good command of English language (reading and writing);

- A basic IT/Computer skills and are familiar with Microsoft excel.

It could be advantageous for students to have a prior knowledge on GIS applications, AutoCAD or similar software's.

ADDITIONAL INFORMATION

Language:

English

ECTS Credits:

5 ECTS

Assessment Procedure:

Grading according to the Danish 7 scale, internal moderation. The examination is based upon assessment of written individual/group reports accompanied with printed maps in which the students will demonstrate acquired GIS skills for emergency response mapping in a given case scenario, as well as their reflections around issues raised by the course management regarding the process.

Certificate:

Students will be given a UN certificate from UNITAR on successful completion of the course.

Software:

GIS lab exercises will be based on ESRI ArcGIS editor 10.2 with extensions (spatial analyst), Google Earth and internet access.

Class Size:

The number of participants is limited to 12.

Institution:

This course is offered by UNITAR/UNOSAT on the basis of a joint agreement with Copenhagen School of Global Health, University of Copenhagen as part of the programme Master of Disaster Management.

The course takes place at the ICRC's ECOGIA Training Center in Geneva, Switzerland.

Course Coordination:

Mr. Luca Dell’Oro, Research Associate at UNITAR/UNOSAT (luca.delloro [at] unitar.org (luca[dot]delloro[at]unitar[dot]org))