QGIS AND GRASS GIS COURSE - BEGINNER LEVEL

ONLINE TRAINING

GRASS GIS

TYC GIS Training

GIS Course.com
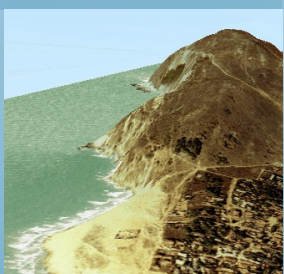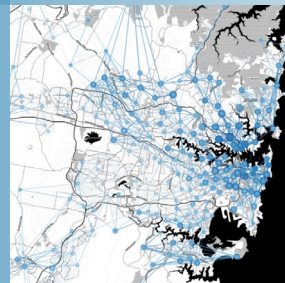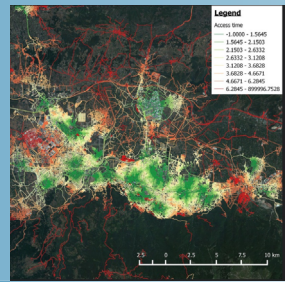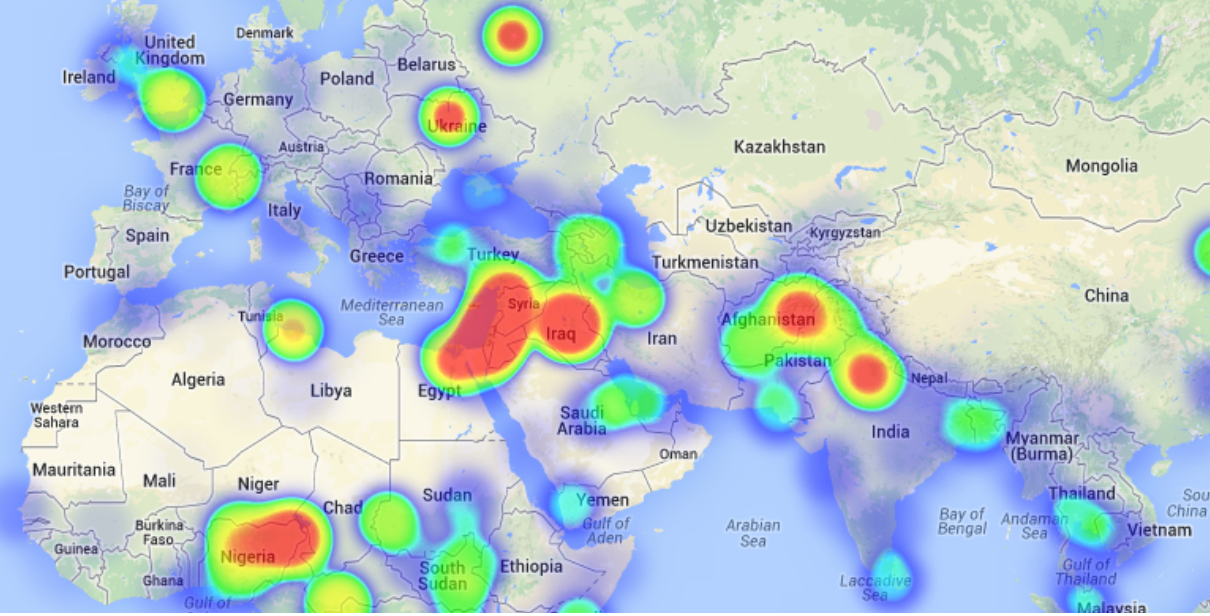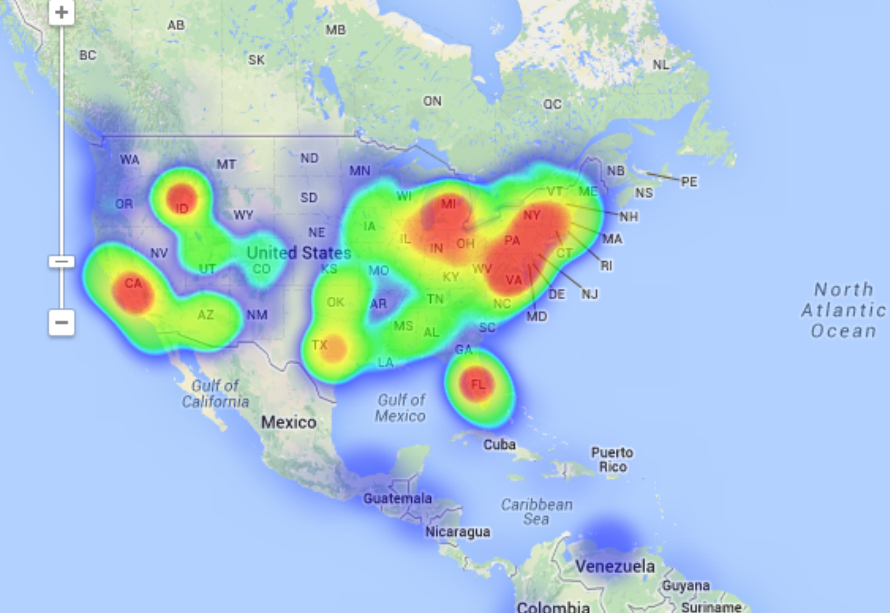
COURSE

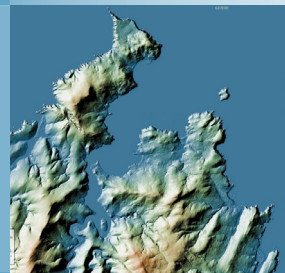The course objective is to initiate the student in QGIS, a free and open source desktop geographic information system software, with a complex working environment which allows users to analyze and edit spatial information. QGIS supports multiple types of data (vector and raster formats), web services, providing in the same time, a variety of useful commands and utilities for geo-processing due to its integration with GDAL and OGR libraries. QGIS links also with other open-source GIS packages, including GRASS GIS (Geographic Resources Analysis Support System), extending its capabilities to digital satellite image processing and analysis.

The course is structured in units with different levels of difficulty that comes in help of the student who will learn the general concepts of a Geographical Informational System, working with vectorial, alphanumeric and raster data, handling the geo-processing tools and map creation.

GOALS

· Highlight the importance and utility of a Geographic Information System (GIS), its integration and applicability in a variety of professional sectors.

· General overview about the basic skills needed in QGIS and GRASS GIS handling and essential concepts used by a GIS system.

· Learn about GIS key tools in an appropriate and professional way, usage of vector and raster data information in order to develop complex spatial analysis.

· Find about all possible difficulties which you may encounter in the execution of GIS projects, and their solutions through practical exercises.

· Gain experience in data preparation, layout development, map creation and high quality products delivery.

METHODOLOGY

Our online courses, are distributed via Moodle, the world's most popular learning platform. It is a highly flexible Learning Management System that can be used to conduct and access courses, accomplish tasks of practical exercises, interact face-to-face to the teaching staff or benefit of support and resources at any time.
The online platform can be accessed 24 hours a day, in which the student will be able to ask for help at any given moment. The instructors will act as supervisors during all the training process, offering support for any possible difficulty encountered by the students along the course.

The course is structured in different modules, making it easy for the student to search for training material, download information, complete practical exercises and take assessments in order to verify their new gained abilities. The instructors will assist the students throughout all the course period, offering progressive help and information according to their evolution.

INSTRUCTORS

Alberto Holguín Asensio

holds a Bachelor Degree in Environmental Sciences and has more than 10 years of experience in the field of Remote Sensing and GIS applications regarding natural resources and environmental management. In addition, he also holds teaching skills and extensive experience as a trainer and instructor due to his involvement with Foundation for the Promotion of Industrial Innovation, Castilla-La Mancha University and the European Social Fund.

PROGRAM

INTRODUCTION IN QGIS

About QGIS
Characteristics of QGIS
Start using QGIS

QGIS TOOLS

QGIS Configuration
General tools
Working with projections
QGIS Browser

VECTOR DATA MANAGEMENT AND TABLES

Introduction
Vector and alphanumeric data visualization
Editing data
Working with Vector Data
Working with tables

Practical exercise 3: Working with vector data and tables, operations with vector and alphanumeric data.

WORKING WITH RASTER DATA

Introduction
Display raster data
Raster calculator
Working with images

Practical exercises 4: Working with raster data and operations with images.

QGIS PLUGINS

Additional modules of QGIS or "plugins"
Description of Plugins incorporated in QGIS
Operations through "plugins"

Practical exercises 5: Different QGIS "plugins" and their applications: GDAL library tool, georeferencing, coordinate capture, format converter.

INTEGRATION WITH GRASS GIS

GRASS plugin
Loading raster and vector data
GRASS tools
Create and edit vector layers
Work with raster data

Practical exercises 6: Handling GRASS tools: Location, Mapset, etc.

CREATE MAPS AND RELATED PRODUCTS

Creation tools
Graphic elements
Atlases generation
Graphic output creations

Practical exercises 7: Map creation with QGIS.

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📞 (+34) 910 325 482   ✉ training@tycgis.com

Calle Fuencarral 158,
Entreplanta, Oficina 16-17
28010 Madrid

TYC GIS MÁLAGA
Avda. Pintor Joaquin Sorolla 137, 1° D
29017 MÁLAGA

TYC GIS MÉXICO
Tequesquitengo 4, Fracc. Cuaunáhuac
C.P. 62450,
Cuernavaca, Morelos.

TYC GIS PANAMÁ
Calle Eusebio A. Morales
El Cangrejo
PH Neo Plaza Oficina 2015