Formation - Geographic Information Systems

GIS-EN-D | **Distanciel** | **5 jours**

Geographic information systems are used in multiple processes today. The 5 days in Geographic Information Systems training aims at providing a complete spectrum of GIS potential over multiple disciplines dealing with spatial data

Niveau

Découverte

Public

Graduate from all technical disciplines

Objectifs

Attendees will be able to implement the following skills:

- Understand the types of data that GIS supports and how to manipulate them
- Perform spatial analysis
- Create a decision-making model
- Integrate spatial and non-spatial data and integrate, manage and analyze data to produce information for decision-making

Pédagogie & ressources techniques

- Participative lecturing
- Case studies
- Teamwork/mini project

Évaluation des acquis

- Trainees are assessed throughout the training through practical application phases and interactions with the trainer
- A final on-the-spot evaluation may also be carried out at the end of the course and/or at the end of each module using tests designed to verify the learners' understanding and assimilation of the knowledge linked to the training objectives

Prérequis

No prerequisites are necessary to follow this course

Responsable

IFP Training instructors, with expertise in the field and trained in modern teaching methods adapted to the specific needs of learners from the professional world

Programme

INTRODUCTION TO GIS

Understand the components, goals, and reasons so many professionals use GIS.

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GIS BASICS

Essential GIS concept and tools and data types; principle of cartographic geo-referencing.

COORDINATES SYSTEMS & PROJECTION

Introduction to principal coordinate system and projections.
Understand the datum and coordinates conversion. Maps classification.

GEOREFERENCING

Theory and practice of georeferencing. Error estimation and maps re-projection.

VECTOR & RASTER MODEL

Definition of raster and vector model. Concept of pixel, resolution and grid model. Definition of point, polyline, polygon. Shapefile model, table of attributes, field definition, records and entities.

DATA EDITING

Shapefile creation, graphic and alphanumeric editing.

GEOPROCESSING OPERATORS

Operators for extraction, selection, proximity and statistics. Data overlaying, intersection and buffering.

NUMERIC CARTOGRAPHY

Digitalization and standardization of cartography. Topographic databases and their characteristics.

GEODATABASE MODEL

Relational and object oriented geodatabase. Normalizations rules, database creation and maintenance.

SQL LANGUAGE

Presentation of SQL language for database interrogation. Usage of SQL syntax to extract data from a database. Definition of logical (AND, OR, NOT, XOR...) and mathematical operators.

TOPOLOGIES

Definition of topologies, relations among points, lines and polygons. Topological rules and their utilization.

RELATIONS, JOIN & SPATIAL JOIN

Creation of join and spatial join among shapefiles and tables. Rules definition and implementation.

RASTER ALGEBRA

Operations among raster data. Zonal and local operations.

SPATIAL DATA ANALYSIS

Performing data analysis on spatial data, criteria, potential and future development. Selecting features; interactive selection; select by attributes; select by location; using the right tool of selection.

DECISION MODEL CREATION

Creation of decisional models, validation and standardization.

GIS PROJECT CREATION

Consolidate all the knowledge with the creation of a complete GIS project.

LAYOUTS PRINTING & REPORTING

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Creation of printing layouts and automatic reporting.

IFP Training est référencé au DataDock. Rapprochez-vous de votre OPCO pour connaître les possibilités de financement de cette formation.
Pour vérifier l'accessibilité de cette formation à une personne en situation de handicap, contactez notre référent à l'adresse suivante : referent.handicap@ifptraining.com

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