GML Foundations

Audience Course GML Foundations
The course GML Foundations course is intended for analysts and developers who want to learn the basics of GML and apply GML in geographic information systems.

Prerequisites Course GML Foundations
Basic knowledge **XML** is required to participate in this course.

Realization Training GML Foundations
The theory is discussed on the basis of presentation slides. The theory is explained further by means of practical demos. After discussing a module, there is the possibility to practice. Course times are from 9.30 to 16.30.
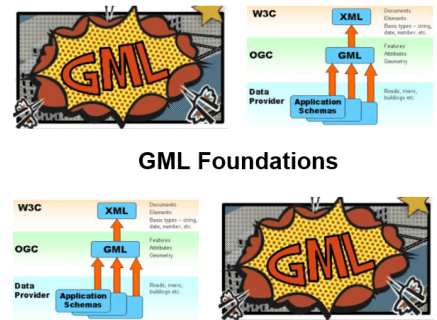
Certification GML Course
Participants receive an official certificate GML Foundations after successful completion of the course.

Duration: 2 days   **Price: € 1299**

Open Schedule

GML Foundations

Content Course GML Foundations

In the course GML Foundations participants learn to deal with the OpenGIS Geography Markup Language Encoding Standard (GML).

GML Intro
GML is an XML vocabulary to express geographic properties. GML is not only a modeling language for geographic systems, but also an open standard for geographic transactions over the Internet.

GML Grammar
Like all XML vocabularies the GML grammar has two parts: an XML Schema that describes the document structure and instance documents that describe the actual data.

GML Variants
In the course different variants of GML syntax are discussed such as INSPIRE GML and AIXM5 GML.

XML Syntax
The course starts with an overview of the basic concepts of XML such as the XML document structure, the XML syntax rules and the difference between well formed and valid documents. The role of XML Namespaces is also discussed here.

XML Schema Standard
Subsequently the XML Schema standard is discussed, which defines the naming, sequence and data types of XML instance documents based on a schema. The different styles of XML Schema construction and the definition of simple and complex user defined data types are discussed.

GML Data Model
Then attention is paid to the GML data model with the Features, Geometry, Topology and Temporal Schemas. And also the GML domain vocabulary with Spatial Values, Object Property Rules, Associations and the role of Attributes is discussed.

GML Components
An explanation of GML components such as Points and Curves, Surfaces and Solids, Nodes, Edges, Faces and Curve Segments are also part of the course program. This also includes Surface Patches, Interpolated Curves, Coverages and Surface Interpolation.

GML Coordinate System
Finally the GML Coordinate Systems with CRS Dictionary Entries, Units of Measure and Quantity Types and GML Modeling with Schema Repositories, Substitution Groups and Schema Modularization are discussed.

Modules Course GML Foundations

Module 1 : XML Review	Module 2 : XML Schema	Module 3 : GML Model
Structured Documents	Use of XML Schema	Core Schema Components
XML as Meta Language	Well Formed versus Valid	Features Schema
XML Document Structure	XML Schema Components	Geometry Schema
XML Elements and Attributes	XML Schema Vocabulary	Topology Schema
Well Formed Documents	XML Schema-instance	Temporal Schema
Valid Documents	Simple and Complex Types	Metadata
Processing Instructions	Design Approaches	Domain Vocabulary
Entity References	Salami Slice Design	Spatial Values
CDATA Sections	Russian Doll Design	Object Property Rule
Character References	Venetian Blind Design	RDF as Reference
Namespaces	XML Schema Data Types	Associations
XML Presentation	Global and Local Declarations	Remote Properties
XML Transformation	Annotating Schema's	Role of Attributes
Module 4 : GML Components	**Module 5 : Coordinate Systems**	**Module 6 : GML Modeling Rules**
Points and Curves	CRS Reference System	Feature Types
Surfaces and Solids	GML Attribute srsName	Feature Collections
Surface Patches	CRS Dictionary Entries	Spatial Types
Interpolated Curves	New CRS Components	Spatial Properties
Surface Interpolation	Temporal Components	Managing Namespaces
Curve Segments	Dynamic Features	Import versus Include
Topology Primitives	Abstract Feature Type	Versioning
Nodes, Edges and Faces	Temporal Primitives	Schema Repositories
Coverages	Temporal Reference Systems	Substitution Groups
Domain Sets	Units of Measure	Schema Modularization
Range Set	Base Unit Dictionaries	Derive by Extension
Grid Function	Quantity Types	Derive by Restriction