

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

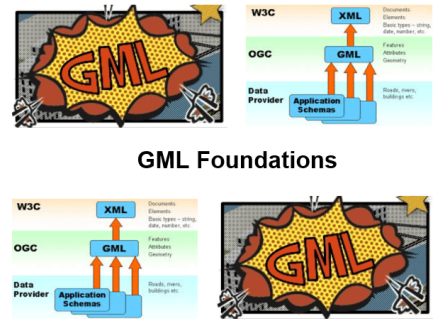
The theory is discussed on the basis of presentation slides. The theory is explained further by means of practical demos. After discussing a module, there is the possibility to practice. Course times are from 9.30 to 16.30.

Certification GML Course

Participants receive an official certificate GML Foundations after successful completion of the course.

Duration: 2 days

Price: € 1499

[Open Schedule](#)


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