

## **GEO5011 Geographical Information Technology for Web Developers - 2010-2011**

**Course code:**

GEO5011

**Course name:**

Geographical Information Technology for Web Developers

**Course level:**

Master (syklus 2)

**ECTS Credits:**

5

**Duration:**

Autumn

**Duration (additional text):**

The course is cancelled in 2010/2011.

**Language of instruction:**

English

**On the basis of:**

- IMT 4501 XML and Web Technologies
- IMT 4821 Databases in electronic publishing

**Expected learning outcomes:**

After completed course the students will understand how the geographical reality can be represented in digital form. The students will have knowledge about formats, standards and technologies relevant for linking web based applications to geographical information systems. The students will have experience in developing and preparing web-based applications handling geographical information. The students will know and be able to use results from important research projects in this topic.

**Topic(s):**

- Norwegian geographic data sets
- Geographical reference systems and geotagging Geographical databases SDI - Spatial Data Infrastructures Standards for geographical information in XML (KML and GML)
- Technologies and methods for handling geographical information on the web (e.g. WMS, WFS, SVG)
- Geographical information in web applications and web services Location based services Cartography for webmaps

**Teaching Methods:**

Net Support Learning

Project work

Meeting(s)/Seminar(s)

Tutoring

**Teaching Methods (additional text):**

The course will be offered both as an ordinary campus course and as a course that is offered in a flexible way to off-campus students. Lecture notes, e-lectures and other types of e-learning material will be offered through an LMS. Communication between the teachers and the students, and among the students, will be facilitated by the LMS.

**Form(s) of Assessment:**

Oral exam, individually  
Evaluation of Project(s)

**Form(s) of Assessment (additional text):**

Individual oral examination (30 minutes each student); discussion based on the project work and also relevant general questions.

Final grading based on total evaluation of (group based) project work and individual examination.

**Grading Scale:**

Alphabetical Scale, A(best) – F (fail)

**External/internal examiner:**

Internal examiners

**Re-sit examination:**

There is no re-sit examination.

**Tillatte hjelpemidler:****Coursework Requirements:**

Oral presentation (approved by teacher). The students will present parts of the curriculum as course assignments.

**Academic responsibility:**

Faculty of Technology, Economy and Management

**Course responsibility:**

Høgskolelektor Sverre Stikbakke

**Teaching Materials:**

## Books:

- Davis, 2007: GIS for Web Developers, ISBN 0-9745140-9-8
- Lake, 2004: GML – Geography Markup Language, foundation for the geoWeb. Wiley. ISBN 0-470-87154-7
- Longley et al, 2005: Geographic Information Systems and Science. Wiley, ISBN 0-470-87001-X
- Peng/Tsou, 2003: Internet GIS. Wiley. ISBN 0-471-35923-8

## Other:

- Research papers
- Standarder fra OGC - Open Geospatial Consortium:
  - The OpenGIS® Abstract Specification, Topic 5: Features, ([http://portal.opengeospatial.org/files/?artifact\\_id=29536](http://portal.opengeospatial.org/files/?artifact_id=29536))
  - OpenGIS® Implementation Specification for Geographic information - Simple feature access - Part 1: Common architecture ([http://portal.opengeospatial.org/files/?artifact\\_id=18241](http://portal.opengeospatial.org/files/?artifact_id=18241))
  - OGC® KML ([http://portal.opengeospatial.org/files/?artifact\\_id=27810](http://portal.opengeospatial.org/files/?artifact_id=27810))
  - OpenGIS® Geography Markup Language (GML) Encoding Standard([http://portal.opengeospatial.org/files/?artifact\\_id=20509](http://portal.opengeospatial.org/files/?artifact_id=20509))
  - OGC Web Map Service Interface ([http://portal.opengeospatial.org/files/?artifact\\_id=4756](http://portal.opengeospatial.org/files/?artifact_id=4756))
  - Web Feature Service Implementation Specification ([http://portal.opengeospatial.org/files/?artifact\\_id=8339](http://portal.opengeospatial.org/files/?artifact_id=8339))

**Additional information:**

Preregistration in Fronter is necessary to ensure that the course is offered. The course will not run if less than five students have preregistered by August 20.

The course is cancelled in 2010/2011.

**Publish:**

Yes