

# The Development of the Multimedia-Learning Package on Geothermal Water Resources for the United Nations University

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**Themenbereich:** Neue Designs von Lehrveranstaltungen

## Schlagworte

Multimedia, Self-Teaching, United Nations University, Geothermal

## Lehrkonzept, Reflexion & Evaluation

Geothermal water represents a steady and reliable source of renewable energy for many countries. Good education and training on geothermal energy development and management have been offered by various universities and institutions, especially in the areas where geothermal resources have been highly developed and utilized. The objectives of this multimedia-learning project are to provide easier access to geothermal education and training for students and practitioners who already have educational or professional background in natural sciences and/or water resource management, but lack, or require knowledge on, geothermal resource aspects as part of environmental resource management. The course package aims to broaden the view on environmental resource management and encourage the development and utilisation of geothermal waters worldwide in a technically and ecologically sustainable manner. The multimedia-learning package under development will explain the nature, the occurrence, the exploration, usage, and management of geothermal water. It will also give examples of what kinds of geothermal applications have been successfully installed in the past.

The target audience is international (both developed and less developed countries), but with a special focus on people from developing and transitional countries. Learners should have achieved an educational level comparable to advanced undergraduates in earth sciences, environmental sciences or other related fields. Since all course units are in English, a good command of English is also necessary.

The course package will serve as supplementing material for the international training on geothermal resources of the Geothermal Training Programme of the United Nations University but could also be used for self-teaching or for any other university course such as the master course “Hydrogeology and Environmental Geoscience” of the University in Göttingen.

The technical concept ensures that multimedia learning contents can be viewed with any standard browser on different operating systems. The final course package will be a compilation of web pages with text, images, charts, video clips and interactive maps. Each chapter also provides a set of problems (multiple choice, sequence tests, calculations etc.) and solutions for self-assessments. This multimedia learning package offers learners the opportunity to learn everywhere in the world and at their own pace. Furthermore, all the digital contents can be very easily updated and expanded, if changes become necessary.

Most of the development of the interactive content pages and navigation options is based on the Xerte Online Toolkit of the University in Nottingham. Interactive maps have been created with the JavaScript routines of Free HTML5 Maps. The complete course package will be



disseminated in two ways. Primarily, the contents will be available through internet. Additionally, a DVD containing the contents will be available as well.

The development of the multimedia-learning module was initiated and is supported by the United Nations University Institute for Integrated Management of Material Fluxes and of Resources (UNU-FLORES) in cooperation with the United Nations University - Geothermal Training Programme (UNU-GTP) which has a long experience in geothermal education and training for international students and professionals.

**Weiterführende Informationen zu den Autoren**

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Diese Tagung wird gefördert im Rahmen der Projekte:

