



TECHNOLOGICAL EDUCATION INSTITUTE OF  
CENTRAL MACEDONIA  
SCHOOL OF TECHNOLOGICAL APPLICATIONS  
DEPARTMENT OF MECHANICAL ENGINEERING

**Graduate Studies Program:**  
**Academic Year 2014 - 15**

**"Renewable Energy Systems: Design,  
Development and Optimization"**

**Associate Professor K.G. Anthymidis**

**Subject:**

Usage of Geothermal Energy for industrial, domestic and medical purposes.

**Introduction & Motivation:**

Geothermal Energy is renewable energy stored in the form of heat beneath the surface of the solid earth and can be used for many purposes such as industrial (production of electricity), domestic (heating and cooling), agricultural (heating of greenhouses and irrigation of plants), medical (spa baths) and others. The aim of this thesis is to study the usages of Geothermal Energy in our days, especially in the region of Central Macedonia and to determine the advantages and disadvantages of it and its future prospects.

**Implementation & Means:**

Study of the relevant scientific Greek and international literature. Utilize the Library of the Technological Educational Institute of Central Macedonia.

**References:**

- 1) Environmental impacts of the Greek electricity generation sector, Sustainable Energy Technologies and Assessments, Volume 5, March 2014, Pages 19-27, Giorgos Theodosiou, Christopher Koroneos, Nikolaos Stylos.
- 2) Assessment of practices and technologies of energy saving and renewable energy sources in hotels in Crete, Renewable Energy, Volume 36, Issue 5, May 2011, Pages 1323-1328, Nikolaos Zografakis, Konstantinos Gillas, Antrianna Pollaki, Maroulitsa Profylienou, Fanouria Bounialetou, Konstantinos P. Tsagarakis.

**Requirements:** Good knowledge of English.