Postgraduate Studies Program
«ENVIRONMENTAL ENGINEERING»

**Specialization:** 1-WRC: WATER RESOURCES AND CLIMATE CHANGE

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<td>WRC 107</td>
<td>Advanced GIS Applications in Environmental Engineering</td>
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**Required:** ☐  **Elective:** X

**Instructors:** Assistant Professor Androniki Tsouchlaraki

**Bibliography**
1. Τσουχλαράκη Ανδρονίκη & Αχιλλέως Γεώργιος «Μαθαίνοντας τα GIS στην πράξη», Εκδόσεις Δίσιγμα, (2010).

**Course objectives**
The course aims to the introduction into the ArcGIS package and to the analysis and design of basic applications that are used in the environmental science. Additionally the course includes a series of laboratory exercises.

**Syllabus**

**1st Week**
Getting started with ArcGIS – The Arcmap

**2nd Week**
Chartographic presentation of data

**3rd Week**
Use of Symbols

**4th Week**
Georeference – Digitization

**5th Week**
Descriptive data management
6th Week
Tables
7th Week
Selection of spatial data
8th Week
Mapping data and results
9th Week
Spatial analysis
10th Week
3D information management
11th Week
Raster information management
12th Week
Applications

Work load
A. Lab exercises
  1. Creating a map.
  2. Creating and updating tables.
  3. Creating Maps using either a standard layout or a free—design layout.
  4. Classifying the Municipalities according to landuse categories.
  5. Classifying Municipalities according to their population

Student evaluation
  1. Laboratory exercises (40%)
  2. Project (30%)
  3. Final examination (30%)