

**City and Regional Planning Department  
College of Environmental Design  
King Fahd University of Petroleum & Minerals**

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**CRP 515: Advanced Topics in GIS**  
**Term 142 - 13<sup>th</sup> Offer**  
*Course Credit Hours: 3.0*

**Instructor:** Dr. Baqer M. Al-Ramadan

**Instructor Web Page:** <http://faculty.kfupm.edu.sa/crp/bramadan>

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**Office Hours:** 01:00 – 03:00 PM Sundays, Tuesdays, Thursdays and by appointment.

**Course Meeting Time:** 03:20 - 04:35 PM Mondays & Wednesdays

**Course Description:**

This course builds on knowledge gained in the introductory GIS course CRP 514. Various GIS related topics will be covered in this course. Beside assignments, the main course work component will be an independent research/independent practical GIS Work. Hence, each student will choose a GIS-related topic and submit either a **Research Paper** or Carry out a GIS Project and submit a **Project Report**.

**Course Prerequisite:** CRP 514: Introduction to GIS

**Course Textbook:** There is no textbook designated for this course.

**GIS Lab:** Room 449-1/19

**GIS Lab Hours:** 7:30 AM – 4:00 PM (Except Lunch break) – Sunday to Thursday

**GIS Lab Administrator:** Mr. Raziuddin **E-Mail:** [razi@kfupm.edu.sa](mailto:razi@kfupm.edu.sa)

**Phone:** (013) 860-2331

**Grading Breakdown:**

Attendance & Participation	5%
Assignments	35%
Term Research Paper/Term Project	60%
<b>TOTAL</b>	<b>100%</b>

## **Assignment Topics:**

- 1. Working with Layers and Map Symbology**
- 2. Working with Labels and Annotation**
- 3. Displaying Locations from Tabular Data**
- 4. Modifying the ArcGIS Interface**
- 5. Designing a GIS Database**
- 6. Populating the Geodatabase**
- 7. Setting Geodatabase Validation Rules**
- 8. Editing Spatial and Attribute Data**
- 9. Spatial Adjustment**
- 10. Spatial Analysis Functions and Geoprocessing**