

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

CRP 514: Introduction to GIS

Term 181 – 29th 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: 1:00 – 3:00 PM Sundays, Tuesdays & Thursdays and by appointment.

Course Objective:

The course main objective is to introduce the rapidly expanding field of GIS technology. To achieve that objective, the course covers the fundamental concepts of GIS such as GIS Components, Data Input and Output, Spatial Data Structures, GIS Planning and Implementation, and the various applications of GIS. Other relevant topics are covered such as Remote Sensing and Global Positioning System (GPS). The course includes extensive hands-on assignments to reinforce the presented concepts of GIS.

Course Prerequisite: Graduate Standing.

Course Meeting Times: 8:10 - 9:25 PM Mondays & Wednesdays

Course Web Page: <http://faculty.kfupm.edu.sa/crp/bramadan/crp514/index.html>

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. Mohammad Raziuddin **E-Mail:** razi@kfupm.edu.sa

Phone: 0138602331

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Course Textbook:

Book title: “Geographic Information Systems and Science” by Paul Longley; Michael Goodchild; David Maguire; and David Rhind, 3rd Edition, 2011.

Other handouts and readings will be given to cover other related topics.

Course Software:

The software of this course is ArcGIS 10.x which is available at the GIS Lab (Room 449-1/19).

Course Topics:

1. Introduction to GIS
2. Enterprise GIS: San Diego as a Case Study
3. GIS in Saudi Arabia
4. Global Positioning System (GPS)
5. Location Based Services (LBS)
6. Remote Sensing
7. Internet GIS
8. GIS Applications in Optimum Site Selection
9. GIS Applications in Disasters Management
10. GIS Planning and Implementation

Grading Breakdown:

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|----------------------------|-------------|
| Attendance & Participation | 05% |
| Assignments | 25% |
| Final Exam | 30% |
| Term Paper/Term Project | 40% |
| TOTAL | 100% |