

# GIS Programming

Winter Quarter 2009/2010

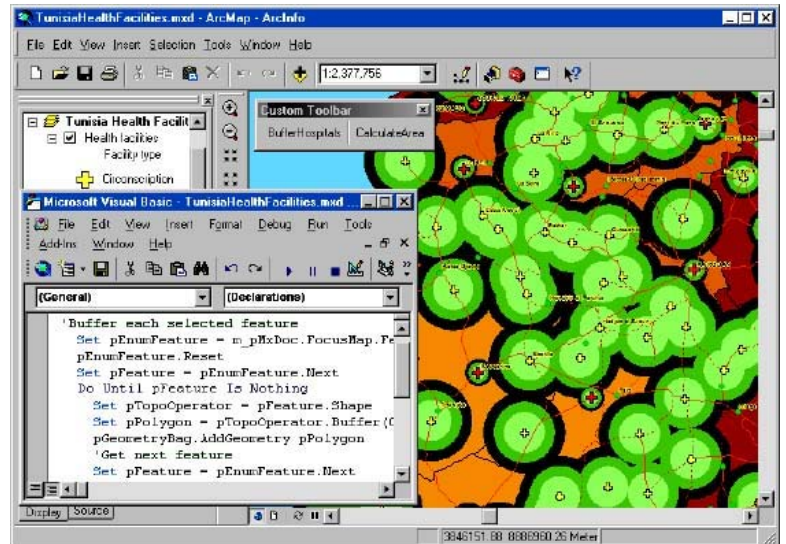
Course# 0693-398-01 (undergraduate) co-listed with 0693-798-01 (graduate)

Time/Location: MW 10:00am-11:50am, Building 9, Room 1130

Credits: 4

## Description

Any serious interest in Geographic Information System (GIS) beyond the “out-of-the-box” capabilities of standard commercial GIS software such as ESRI’s ArcGIS platform requires knowledge of how to program a GIS. Knowledge of how to program a GIS extends the capabilities and possibilities of GIS in numerous scientific, technical, and applied dimensions not possible with “out-of-the-box” GIS capabilities. This course is targeted to students with a serious interest in GIS who wish to learn basic object oriented programming concepts within the context of Geographic Information System (GIS) application development. Students should be comfortable working in PC-based computing environments. **No prerequisites or programming experience required.**

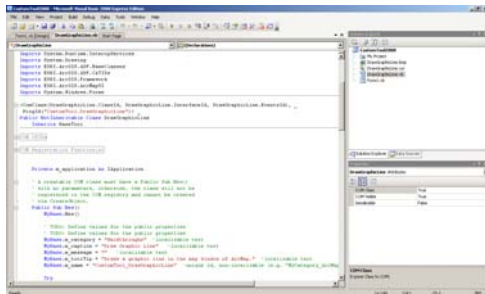


Customizing ESRI's ArcMap GIS software using ArcObjects

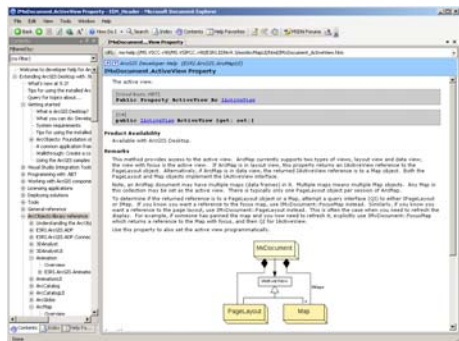
## Objectives

The overall course objective is for students to learn basic Object Oriented (OO) programming concepts and skills for use and application to Geographic Information Systems (GIS). This objective will be achieved through the following learning goals:

- Development of basic proficiency using a modern OO language development environment (MS Visual Studio)
- Development of basic proficiency using a modern GIS object library (ESRI's ArcObjects)
- Understanding of classes, objects, properties, methods, looping, and control structures
- Understanding of the unique characteristics of GIS programming such as programmatically working with spatial data and automated map creation
- Design of user interfaces (UI) for GIS applications such as interactive maps and tool creation for specialized geospatial tasks



Developing GIS applications in MS Visual Studio



Learning about ArcObjects

## For more information contact:

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