

e-Government Online Certificate Program



Geographic Information Systems for Public Managers PA 465

Course Overview: Welcome to PA465 Geographic Information Systems for Public Managers. This is a **4 credit hour** course. You will spend approximately **12 - 15 hours** a week working on the course; however, the time commitment will vary depending on your input, needs, and personal study habits. Students are required to log on to the course a minimum of **4 times a week**, but as discussions develop, you will probably log on more often.

Learning Objectives: There are two basic objectives to this course. First, students will be introduced to some of the tools and functions used by Geographic Information System (GIS) technicians. This introduction, with the time available in a semester, is just a scratch on the surface of the full functionality of GIS. Second, students will be able to place GIS in a public setting and understand several of the important concerns in GIS management. IT management issues are assumed to be the focus of other courses.

At the end of this course, students should not expect to become proficient GIS technicians, capable of answering questions using GIS. Other classes in the College of Urban Planning and Public Affairs – UPP461 and UPP462 – are designed for that purpose. Instead, students should learn how to ask important GIS questions of the public employees they may manage in the future.

In this course students will:

- Understand the problem of maintaining a GIS program in a public setting
- Gain a basic understanding of the mapping and spatial analysis capabilities of a GIS
- Focus on GIS project management issues such as documentation and map design for communication
- Build a GIS project requirements plan

Course Structure: The material is organized into nine modules in three different groups: Introduction to Course; Using ArcGIS; and, GIS Management Concerns. The modules are listed below with approximate dates.

Group A: Introduction to Course

- Module 1: Welcome to Course
- Module 2: GIS in the Public Setting

Group B: Using ArcGIS

- Module 3: GIS Basics
- Module 4A: GIS Functions and Tools – Getting to Know Your Data
- Module 4B: GIS Functions and Tools – Making New Data

Module 5: Finding Data
Module 6: Map Layout and Design

Group C: GIS Management Concerns

Module 7: Cost-Benefit of GIS and GIS Legal Concerns
Module 8: A GIS Project Requirements Plan

See the Calendar in the Course Syllabus content area on Blackboard for due dates for the class activities and assignments.

Course Management System: The course content will be delivered via UIC's Blackboard Learning System. Students will be enrolled into the Blackboard course site each semester after registering. The Blackboard course site is the primary content area for instructors to post lecture notes and articles, post and update grades, and make announcements. Students are expected to log into their course site regularly to learn about any developments related to the course. Learn more about Blackboard at <http://blackboard.uic.edu>.

Textbooks:

Ormsby, Tim et al. *Getting to Know ArcGIS Desktop – Updated for ArcGIS 9.3*. 2nd Edition, 2008. ESRI Press (ISBN 978-1-58948-210-4). Used copy is OK.

Croswell, Peter. *The GIS Management Handbook*. 2009, Kessey Dewitt Publications (ISBN 978-0-9824093-0-5). Not sure you can find a used copy but if so, go for it!

Other Learning Resources: Readings or links to readings other than those in textbook will be provided on Blackboard. Key documents will be available to you in E-Reserves.

It is highly recommended that you build and maintain workspace for this course on a flash drive with a minimum capacity of 2GB.

Software: The instructors will provide you with a DVD containing ArcGIS/ArcEditor 9.3.1. You will be able to install this software on your own computer and use it for 1 year before the license expires. Use is limited to educational purposes only.

The technical requirements of your computer are as follows:

- Windows 2000 Professional, Windows XP, Windows Server 2003, Windows Server 2008, Windows Vista, or Windows 7
- 1.6 GHz or higher; Intel Core Duo, Pentium 4 or Xeon processors
- 1 GB RAM minimum; 2 GB or higher recommended
- 2.4 GB free disc space
- Microsoft Internet Explorer 6.0 or higher; Broadband (DSL, cable modem, or satellite)
- DVD drive

This software only operates on the Windows operating system. If you have a Mac, all is not lost. Please check out the Urban Data Visualization Laboratory website <http://www.uic.edu/cuppa/udv/GIS/ArcGISonMac200911.pdf>

In addition to the ArcGIS software you will need Word, PowerPoint, and Excel (if you will be using the 2010 versions of the Microsoft Office Suite, please save into 2007 or 2003 versions before submitting outputs to instructors).

To view the videos on Blackboard, you will need a reasonably current version of Adobe Flash Player. Version 10.1 can be downloaded from www.adobe.com/ at no cost.

Course Participation: Students must log into the Blackboard site at least 4 times per week. Over the entire course, doing so is worth 10 points. A week will extend from Monday through Sunday.

In group efforts, all students in the group will get the same scores. It is, of course, assumed that in group activities and exercises, all members of a group are participating. Near the end of the semester, you will be asked to email the instructors with (a) an assessment of your own participation in your group, and (b) an identification of the member or members of your group who contributed significantly to the group products. Based upon these confidential emails, the instructors will assign up to 3 bonus points for individual participation in the group.

Activities and Exercises:

Module Activity Rubric: Assessment of Initial Answer to Activities (2 points)

Initial submittals revealing the depth of your understanding of the purpose of the activity and which provide explanation for your correct answers will earn the highest scores. Successful completion includes following instructions relevant to each activity. Such instructions could include size of submittal (word limitations, for example), requested page orientation, and guidelines for transmittal to instructors. 1 point will be deducted if the specific instructions are not followed. It is important to use Standard English and to avoid the variety of common texting abbreviations.

1 point will be deducted for activity postings submitted late but within 2 days of the due date. 2 points will be deducted for postings that are more than 2 days late.

Module Activity Rubric: Assessment of Responses to Activity Postings of Other Students (2 points)

For many activities you will be asked to respond to the initial postings of at least two other classmates. Responses to postings can earn a maximum of 2 points. To earn the maximum, students must provide meaningful responses. A “meaningful” response could be an observation or a question but it must be more than just “wow” or “that’s nice” or “me, too” or “please explain” or some other similar comment showing no effort. No points will be earned for response postings after the due date.

Module Assignment Rubric: Assessment of Course Exercises (variable points – see “Assignment Scoring.xls” in Course Syllabus content area on Blackboard)

The exercises provide a significant opportunity for you to demonstrate your grasp of much of the course content. A successful submittal will demonstrate, not only an understanding of the concepts focused upon in the exercise but also your care in following the instructions. The detailed instructions associated with each Course Exercise will list the key concepts. Failure to demonstrate the meaning of the concept or the use of the tool application will result in a deduction of points. Many exercises build upon knowledge gained in earlier exercises of modules. These also will be assessed.

Many exercises require the submittal of a project log. The project logs ARE REALLY IMPORTANT for a variety of reasons (see Resources in the Module 3 content area on Blackboard). For the purposes of

grading, the logs enable us to understand how you approached or completed the requested tasks. As a result, failure to submit a log that provides adequate detail will result in the deduction of points – and these could be significant if we cannot figure out how you got your answers.

Carelessness in preparation or transmittal of the assignment will also result in a deduction of points. As with the activities, it is important to use standard English and avoid common texting abbreviations. 1 point will be subtracted for assignments that are submitted late, but prior to instructor responses (up to 2 days after the due date. 2 points will be deducted for later submittals.

The allocation of points across the entire course can be found in “Assignment_Scoring.xls” in the Course Syllabus content area on Blackboard. These are summarized below. Note that participation including your responses to the postings of others is weighted heavily. This is because participation is at the core of a successful online class.

Grading:

| | Percent of Grade |
|-----------------------------------|-------------------------|
| Participation Including Responses | 27% |
| Activities Excluding Responses | 18% |
| Course Exercises | 55% |
| Total | 100% |