

Washington College
GIS Program
Presents:

Four Workshops
Available via Distance
Learning Technologies:

- Introduction to ArcGIS (2 Classes)
- Intermediate ArcGIS (1 Class)
- Database Competency (1 Class)
- Information Technology Competency (1 Class)

Geographic Information Systems (GIS) Workshops

Introduction to ArcGIS

This introductory course will teach students how to operate ArcGIS version 9.2/9.3.

The workshop will be taught using Adobe Connect Professional, an interactive educational web program that permits synchronous instruction using computer screen sharing and voice over IP (VOIP). The program allows for two way communication between the teacher and student(s) and also allows the teacher to remotely control the student's computer.

The workshop will be divided into 14 sessions with sessions being delivered weekly until the workshop is completed. Each session consists of a lecture and a live demonstration of the lesson taking about one hour. After this the student works on the individual lesson on their own but if they need help then they request assistance from the teacher and the teacher's student assistants. Up to three breakout sessions can be run simultaneously permitting one on one interaction to resolve any questions about the lesson. Each hands-on lesson can be completed in 90 minutes. Therefore each session is 2 ½ hours long for a total instruction time in hours of 35 hours. Between class sessions each student will have assigned readings and hands on homework assignments to strengthen the skills learned for that lesson. If assistance is required, Adobe Connect can be used to provide this assistance to the student. Each workshop session will be recorded in case a student misses a lecture they can watch a recording.



This workshop will provide the fundamental geospatial technology skills needed by the targeted workforce. By spreading the 35 hours of instruction over 14 weeks the student is allowed time to practice newly learned skills which will improve retention of skills. In addition, through the use of distance learning, the students incur no travel costs or lost time trying to attend the workshop at some arbitrary fixed location.

300 Washington Avenue
Chestertown, MD 21620

FREE TO ELIGIBLE STUDENTS!

You must meet one of the following:

- **Currently working for a military or defense contractor in Maryland or planning to relocate to Maryland due to BRAC.**
- **Currently working for an engineering, construction or surveying firm working on BRAC installations.**
- **Currently working for a Maryland law enforcement agency or a county/local government impacted by BRAC**

Inside this Course:

Topics taught in weekly sessions

1 What is GIS and Intro to ArcMap	8 Information Fundamentals in ArcMap
2 Data organization and Intro to ArcCatalog	9 Classification techniques
3 Elements of a Good Layout & Using	10 Using the Find tool and the Select by Attribute Tool
4 Geographic Fundamentals and the Data Frame	11 Data relationships
5 Projections – Why they do matter	12 Geodatabases and raster catalogs
6 Select by Location	13 The basics of digitizing
7 Geoprocessing	14 Capstone Project

**To confirm eligibility, students must supply a letter from their employer verifying eligibility.*

Intermediate ArcGIS

This intermediate course will teach students intermediate ArcGIS version 9.2/9.3

The Intermediate ArcGIS courses will be provided exactly the same as the Introduction to GIS course except only one workshop will be offered during the grant period. Up to 20 students can attend this workshop. The Intermediate workshop builds upon skills learned from the Introduction workshop and also benefits an employee who has some skills but needs to acquire more intermediate skills.

We would like to thank WREC for their full support in helping Washington College's GIS Program obtain the BRAC grant



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<http://brac.washcoll.edu>

Inside this Course:

Topics taught in weekly sessions

1 Geodatabases	8 Georeferencing
2 Advanced Attributes/ SQL Queries	9 Spatial Adjustment
3 Customizing ArcGIS User Interface	10 Digitizing
4 Classification Tips and Tricks	11 Geocoding
5 Hyperlinking	12 Introduction to Spatial Analyst
6 Labels and Annotation	13 Google Sketchup
7 Working with Rasters	14 Introduction to 3D Analyst

Register Online!
<http://brac.washcoll.edu>

Database Technology Competency

The course builds on demonstration of successful completion of the "Information Technology Competency" course. Many of the tools and capabilities (e.g., working with servers, web site design and development, etc.) of that course will be exploited in this course. The course is structured as 8, 3-hour integrated lecture/laboratory-sessions.

Inside this Course:

Topics taught in weekly sessions

1 Introduction to Database Concepts;	5 MS Access – Queries and Report
2 The Basics of Spreadsheets and MS	6 Use of MS Excel and MS Access in
3 Advanced MS Excel Use	7 Databases and the Internet; Active
4 The Basics of MS Access	8 GIS Case Study – Theory and Practical Application

Please Note the Following Requirements for the Course:

- **The computer used for class must have ArcGIS Installed**
- **A Pre-Class Meeting will be conducted for each student**
- **Audio Headsets or Desktop Speakers are REQUIRED**
- **A LAN, DSL or Cable modem is required; NO DIAL UP!**

Information Technology Competency

This course and its follow-on companion course, *Database Competency*, are designed to teach essential and practical skills that complement the preceding ArcGIS courses. They are to be taught using the same classroom methods (e.g., Adobe Connect) and through use of specially developed tools and techniques to ensure mastery. We believe these tools and techniques distinguish our program and are unique in the industry. They have been developed and tested over the last 9 years in teaching Computing Science subjects at Washington College and other institutions such as George Mason University for both undergraduate, non-science students and working/adult learners. Each course will be offered once during the summer of 2009.

The course introduces students to a wide range of topics in computer science. The material covered in this course includes such important concepts as: hardware design, computer organization, system software, language models, and programming (including algorithm formulation and problem solving strategies). It assumes no background or experience in computer science, programming, or mathematics. Students will gain a fundamental proficiency in programming with JavaScript, html, and Visual Basic. As part of day-to-day class activity, homework, quizzes, and projects, students will also become proficient in the use of: 1) email, 2) computer virus protection, 3) File Transfer Protocols, 4) web browsers and search engines, and 5) the following applications of Microsoft Office 2007: MS Word, MS PowerPoint, and MS SharePoint Designer or MS FrontPage. Each class period includes content instructions and proficiency/skill development in use of computers. Students will be provided work between classes that will ensure they are prepared for each class and master knowledge/skills in material previously covered exploiting teaching/learning strategies that have been used successfully with adult learners since 2000 in many courses. The course is structured as 8, 3-hour integrated lecture/laboratory-sessions.

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**Each class size is limited to 20 Students!
Register soon!**

Inside this Course:

Topics taught in weekly sessions

1 MS Office "primer"; Exploring the Human-Computer Interface; MS Word primer	5 Representing Media Digitally; MS PowerPoint primer
2 Representing Information Digitally;	6 Basics of Networking and Search
3 Principles of Computer Operation;	7 JavaScript
4 Debugging; Algorithmic Thinking	8 Building websites and working with servers

Schedule for Workshops

COURSE	DATES	TIME
INTRO TO ARCGIS (1ST SESSION)	WEDNESDAYS, BEGINNING MARCH 18 - JUNE 17TH	4:00 - 6:30 PM
INFORMATION TECHNOLOGY COMPETENCY	WEDNESDAYS, BEGINNING MAY 13 - JULY 1ST	9:00 - 11:30 AM
DATABASE COMPETENCY	WEDNESDAYS BEGINNING JULY 15 - SEPTEMBER 2ND	9:00 - 11:30 AM
INTRO TO ARCGIS (2ND SESSION)	TENTATIVELY BEGINNING TUESDAY, AUGUST 25TH	9:00 - 11:30 AM
INTERMEDIATE ARCGIS	TENTATIVELY BEGINNING WEDNESDAY, AUGUST 26TH	4:00 - 6:30 PM