

Course Prefix/Number: GIS4043/L

Course Title: Introduction to Geographic Information Systems (GIS)

Course Credit Hours: 4 (lecture 3 + lab 1)

Instructor Name and Contact Information:

- Mrs. Amber Bloechle, MS
- abloechle@uwf.edu

Prerequisites or Co-Requisites: GIS3015/L. Students are expected to have some basic computing skills. Students should be able to perform basic Windows operations: copy files, navigate directories, open programs, etc.

Course Description: The purpose of this course is to teach the theory and practical use of Geographic Information Systems (GIS). Major components of the course include computer representation of geographic information, the construction of GIS databases, spatial analysis with GIS, application areas of GIS, and social and management issues that concern GIS. The lecture portion of the course is intended to provide the theoretical underpinnings of GIS while the lab portion of the course is intended to allow the student to put into practice those concepts and techniques described in lecture. At the end of the course, the student is expected to have an understanding of elementary GIS theory, working knowledge of ArcGIS, and the ability to develop GIS-based solutions to geographic modeling and analysis tasks.

Course Goals:

The primary goal of this course is to introduce the concepts and theory of GIS. The concepts and theory behind GIS applications are essential to solving all spatial problems. This course and program are not about learning any one piece of software or software training.

Lecture

Students will:

- Define GIS, and answer questions like:
 - What is the difference between G.I.Systems and G.I.Science?
 - How does GIS differ from cartography or other similar disciplines?
- Understand the history of GIS and how it has developed into what we have today.
- Understand the role of differing map projections and coordinate systems and learn why they are so important before analyzing GIS data.

- Distinguish between different types of data and measurement principles that are important before analyzing GIS data.
- Be introduced to the raster data model including usage, compression, and storage.
- Be introduced to the vector data model including usage, compression, and storage.
- Discuss the role of GIS in the wider decision-making / management process.

A secondary goal of this course is to become familiar with GIS software to assist in future classes such as Applications in GIS, GIS Programming, and Independent Study. We do use substantial ArcGIS in this course but the goal of the lab section is to introduce students to the software before the more challenging analysis courses such as Applications in GIS.

Lab

Students will:

- Become familiar with common ArcGIS 9.X software tools.
- Learn how to utilize ArcGIS Help.
- Begin simple data processing tasks and map creation.
- Complete common transformation of the differing data models.
- Utilize Geographic Information Systems for spatial analysis.
- Create, edit, and transform spatial data.

About this Course: This course is delivered completely online. You must have consistent access to the Internet.

Learning at a distance may be a very different environment for many of you. You will generally set your own schedules, participate in class activities at your convenience, and work at your own pace. You may spend some additional time online during the first few weeks while you become acclimated to the online class format and you may feel overwhelmed. You should also be prepared to spend approximately 6 - 8 hours per week online completing lessons, activities, and participating in class discussions. Finally, you may want to incorporate these tips to help you get started:

- **Set yourself a schedule** -- check the course web site early in the class week to see what tasks you'll need to work on for the week.

- Become very familiar with the site and how to use it. It is a tool to help you learn!
- **Team up with your classmates** to discuss class assignments and questions you might have. Check the “Classlist” link ? for biography info and email addresses.
- **Ask questions when you need answers.** If you have problems, contact your instructor ASAP! I will help you come up with a solution!

Required Text: *GIS Fundamentals: A First Textbook on Geographic Information Systems*, Bolstad, Paul V., Eider Press 2003. This book is available at the UWF bookstore and various online retailers. Readings from this book are required.

Required Materials:

Internet access (DSL or LAN access recommended)

E-mail Account (all correspondence will be through your student account)

Grading / Evaluation:

Introduction to GIS will use the grading scale specified below. See below for an additional breakdown.

Grading Scale		
A	4.0	94-100%
A-	3.7	90-93%
B+	3.3	87-89%
B	3.0	83-86%
B-	2.7	80-82%
C+	2.3	77-79%
C	2.0	73-76%
C-	1.7	70-72%
D+	1.3	67-69%
D	1.0	60-66%
F	0.0	0-59%

Midterm 15%

Final Exam 15%

Lecture Exercises 20%

Class Participation:

- Muddiest Point Discussions 7.5%
- Directed Discussions 7.5%

Lab Exercises 35%

Special Technology Utilized by Students: This course is totally online. All instructional content and interaction takes place over the WWW. In addition to baseline word processing skills and sending/receiving email with attachments, students will be expected to search the internet and upload / download files. In addition, students without a UWF laptop may need one or more of the following plug-ins:

- Adobe Acrobat Reader: <http://www.adobe.com/products/acrobat/readstep2.html>
- PowerPoint Viewer: <http://microsoft.com/downloads/details.aspx?FamilyId=D1649C22-B51F-4910-93FC-4CF2832D3342&displaylang=en>
- Windows Media Player: <http://www.microsoft.com/windows/windowsmedia/download/>
- Quicktime Player: <http://www.apple.com/quicktime/download/>
- Real Player:
<http://forms.real.com/netzip/getrde601.html?h=207.188.7.150&f=windows/RealOnePlayerV2GOLD.exe&p=RealOne+Player&oem=dl&tagtype=ie&type=dl>
- Macromedia Flash Player:
http://macromedia.com/shockwave/download/download.cgi?P1_Prod_Version=ShockwaveFlash

Expectations for Academic Conduct/Plagiarism Policy:

Academic Conduct Policy: ([Web Format](#)) | ([PDF Format](#)) | ([RTF Format](#))

Plagiarism Policy: ([Word Format](#)) | ([PDF Format](#)) | ([RTF Format](#))

Student Handbook: ([PDF Format](#))

ASSISTANCE:

Students with special needs who require specific examination-related or other course-related accommodations should contact Barbara Fitzpatrick, Director of Disabled Student Services (DSS), dss@uwf.edu, (850) 474-2387. DSS will provide the student with a letter for the instructor that will specify any recommended accommodations.