



FUNDAMENTALS OF GIS GISC 316

Section 001 – Tues & Thurs 12:45-2:45pm EST 422

Section 002 – Mon & Wed 12:40-2:40 EST 356

Section 701 - Online

Fall 2018 – 4 hours

Instructor: Dr. Pat Kambesis
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OFFICE HOURS:
 Monday and Wednesday
 10am-Noon or by appointment

COURSE OVERVIEW:

Fundamentals of file management, basic GIS data management and cartographic design. Topics include file management, data organization, map projections, scale, and accuracy, understanding different map types, making maps with ArcGIS.

PREREQUISITES: GEOG 100 or GEOG 101 or GEOL 111 or Permission of Instructor

REQUIRED MATERIALS:

Textbook: Maribeth Price: Mastering ArcGIS 7th edition
 ISBN:978-007809514

It is important to get the 7th edition as earlier editions are organized differently and page numbers have changed.

COURSE DESCRIPTION:

Each class session will consist of a short lecture followed by lab period during which students are expected to work on their assignments. Student questions should be posted on the class discussion board so that the entire class benefits from the question and response and may even offer help to you as well. Class lecture PowerPoints will be available via Blackboard to accompany the reading. If something isn't clear please ask about it! There will be tutorials and exercises from other sources the instructor will send you links or files when necessary.

LEARNING OBJECTIVES:

Course Objectives: Students will learn the following skills:

1. File management. Using folders effectively, maintaining a logical folder and file structure for working files and keeping all files for one project in one place. Be cognizant of the drive on which your files are located (hard drive, thumb drive, cd, laptop etc.) and avoid creating projects that use files from multiple drives.
2. Project file structure. Be able to deliver complete GIS assignments i.e. deliver not only the project file (.mxd), but also all data files that the project uses.

3. Data file structure. Deliver complete data files for your assignments. Recognize that most GIS data formats use multiple files on disk to present a logical view of a single data file, e.g. a “shapefile” consists of 3-7 real disk files with file extensions .shp, .dbx, .idx, .prj, and so on, and all of these files must be present for the “shapefile” to function.
4. Zip files. Package all the files needed for an assignment into a single compressed (.zip) file for delivery of the assignment to the instructor.
5. Projections and Coordinate Systems. Recognize that the projection and/or coordinate system used by a GIS project affects the accuracy of the project. Be able to identify the coordinate system for a project or set one for a new project.
6. Map scales. Set the projection and/or coordinate system, map units, and geographic units to create an accurate scale for a map.
7. Cartographic Design: Apply the principles of cartographic design with respect to map type (selecting a suitable type for a given data set), symbolization, color, data classification (e.g. the classes that are shown in the legend), typography, and level of generalization to produce maps that are clear and effective in communicating to map readers.
8. Map types: Learn about different map types and which ones are appropriate for the data and information that you are trying to convey.

Technical Skills -Students will be introduced to and become competent with ArcGIS. Some assignments will involve the use of other software as determined by the instructor.

Other Requirements:

1. External drives (like Passports) or thumb drives to back up your homework and lab exercises.
2. If you have enough memory on your home computer this should be enough. You should keep a copy of all assignments until the very end of the semester.
3. You must have reliable access to a recent computer running the Windows operating System. The GIS software used for this class (ARCGIS 10) does not support MAC OS, but that doesn't mean you can't run ArcGIS on your MAC. See the following link for suggestions on how: <http://www.uic.edu/cuppa/udv/GIS/ArcGISonMac200911.pdf>. Keep in mind that you will need to have a licensed copy of Windows (7 is good -avoid 8). These can be bought online at relatively reasonable prices.
4. The instructor will give you ArcGIS software to use. If your computer is not reliable you will need to find another solution which may include using the WKU computer labs. Get any computer issues sorted the first week. Computer issues are not an excuse for late work.
5. A reliable internet source. Some students will have difficulty uploading the large files because of their connection at home. I recommend boosting your home internet during this course or heading out to McDonalds with your laptop! Again, internet issues are not an excuse for late work so you are responsible for having an alternative in place.
6. To submit assignments and labs, you will need a program that does zip compression. The one that comes with Windows will work. If you do use another zip package it must be compatible with my computer. I recommend using the one Windows comes with. If I am unable to open your files I cannot grade them. You will do a practice zip prior to your first assignment so we will also sort this out at the beginning.
7. You must use your topper/WKU email: I will try to answer your questions within 24 hours (except during the weekend where 48 hours is the rule).

ATTENDANCE AND PARTICIPATION POLICY

The university's attendance policy states: “Registration in a course obligates the student to be regular and punctual in class attendance.” As such, attendance and meaningful participation are expected—and graded accordingly. The student is responsible for all material covered in class, whether

or not they are in attendance. Students are expected to be on time and to stay for the entire class period.

Make-up of work or exams is permitted only in the case of illness, mandatory religious obligations, or other unavoidable circumstances or University activities. Prior notice is expected, and an acceptable written document regarding such absences is required.

COURSE FORMAT

Course material will be covered via lecture (lecture material will be available via Blackboard), textbook readings, exercises and tutorials. Students are expected to participate in class activities and discussions.

GRADING POLICIES

Grade will be based on total points as follows (assignments subject to change):

| Class points | | Final Grades |
|-----------------------------|--------------------|---------------------|
| Weekly Labs | 1200 points | 2385-2650 = A |
| Challenge assignments (5) | 250 points | 2120-2384 = B |
| Exams (2 total at 150 each) | 300 points | 1855-2383 =C |
| Final Exam | 900 points | 1590-1854 =D |
| TOTAL POINTS: | 2650 points | Below 1590=F |

Keep track of your grades on Blackboard and make sure all of the assignments that you submitted get recorded. There is no extra credit, however, if a student does an exceptional job on an assignment some extra points may be earned. **Late assignments will be accepted but points will be deducted - 2% for every day late**

STUDENTS WITH DISABILITIES

In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the Office for Student Disability Services in Downing University Center, A-200. The phone number is 270 745 5004. Please **DO NOT** request accommodations directly from the professor or instructor without a letter of accommodation from the Office for Student Disability Services.

ACADEMIC HONESTY

Each student should be aware of the student code of conduct found in WKU's student handbook. Examples of academic dishonesty include cheating on an exam, allowing another student to copy your work under any circumstances; using work from previous semesters; and plagiarism. Those caught cheating in this course will result in failing the course and possible removal from the University.

SCHEDULE CHANGE POLICY

The Department of Geography and Geology strictly adheres to University policies, procedures and deadlines regarding student schedule changes. It is the sole responsibility of the students to meet all deadlines in regard to adding, dropping, or changing the status of a course. Only in exceptional cases will a deadline be waived. The student schedule exception appeal form shall be used to initiate all waivers. This form requires a written attachment of appropriate documentation. Poor academic performance, general malaise, or undocumented general stress factors are not considered as legitimate circumstances.

The Learning Center (TLC) (located in the Academic Advising and Retention Center, DUC-A330)

Should you require academic assistance with your WKU courses, The Learning Center provides free supplemental education programs for all currently enrolled WKU students. TLC @ DUC offers certified, one-on-one tutoring in over 200 subjects by appointment or walk in. Online tutoring is offered to distance learners. TLC is also a quiet study area, with side rooms designated for peer to peer tutoring, and offers a thirty-two machine Dell computer lab to complete academic coursework.

Additionally, TLC has three satellite locations. Each satellite is a quiet study center and is equipped with a small computer lab. These satellites are located in Douglas Keen Hall, McCormack Hall, and Pearce Ford Tower. For more information, or to schedule a tutoring appointment, please call TLC at (270) 745-6254. www.wku.edu/tlc

Writing Center Assistance

The Writing Center is located in Cherry Hall 123 on the Bowling Green campus and also offers online consultations for students who live at a distance or who cannot visit during our operating hours. Our writing tutors have been trained to provide helpful feedback to students at all phases of a writing project: they can help you brainstorm ideas, structure your essay, clarify your purpose, strengthen your support, and edit for clarity and correctness. But they will not revise or edit the paper for you.

.See instructions of the website www.wku.edu/writingcenter

for making online or face-to-face appointments. Or call- (270) 745-5719 during our operating hours (also listed on our website) for help scheduling an appointment.

Strategies for Student Success

Effective study takes time. Success at the college level probably will require more time, and more careful use of time, than many students expect. An oft-quoted rule of thumb is that students should spend two hours outside of class for every hour spent in class. Do you?" This quote comes from an excellent website for suggestions on how to achieve academic success: <http://faculty.winthrop.edu/stonebrakerr/retention/strategies.htm>