

GEOG200

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Description

Course Description: The term “Geographic Information System” refers to the synthesis of information (data), software, and hardware for the express purpose of better understanding the world in which we live. Data are collected and managed within this system, and are ultimately used to question, analyze, and interpret patterns that occur throughout physical space. The interaction between different types of data reveal patterns and relationships that are not otherwise readily detectable. This course will provide students with the theoretical concepts necessary for advancement in the field of GIS, and further enhance their experience in a wide range of multidisciplinary endeavors.

Course Scope:

A Geographic Information System (GIS) is unique in that it enables the examination of data which have geographic location as an inherent property. A GIS is much more than just a mapping software program. Providing a suite of tools for manipulating, analyzing, visualizing and illustrating geographic (spatial) data, the utilization of a GIS reveals relationships, trends and patterns that are not apparent in written or tabular format. Analysis with a GIS generates answers for simple to complex questions such as: where is the best location for a new development? Which residents would be impacted by a change in local zoning? Where has the incidence of Lyme disease increased over time?

Objectives

The successful student will fulfill the following learning objectives:

LO-1 Define Geographic Information Systems

LO-2 Identify GIS data portals on the Internet

LO-3 Describe spatial data as it relates to the students field of interest

LO-4 Compare and Contrast the different types of modeling in GIS and when they are appropriate for use in analysis.

LO-5 Illustrate the differences between raster and vector data types.

LO-6 Discuss how the concepts of scale, resolution, and projection relate to the vector and raster data types.

LO-7 Describe how the cartographic principles of scale, resolution, and projection can be used to address a problem of geographic nature.

LO-8 Summarize the value of GIS to various disciplines such as biology, military/defense, or utilities.

Outline

Week 1: Install ArcGIS software., Introduction to ArcMap, Define Geographic Information Systems and identify careers available in the field.

Learning Objective(s)

LO-1: This week you will learn what a Geographic Information System (GIS) is and how it can be used to answer some of today's tough questions.

Reading(s)

Tutorial – Chapter 1

Other: Install the software

Assignment(s)

Forum: Introduce yourself to the course.

Assignment: Chapter 1

Week 2: Map Design, Identify and review major GIS portals and organizations.

Learning Objective(s)

LO-2: This week we will identify places where we may be able to obtain GIS data and the organizations that create/use GIS data.

Reading(s)

Tutorial – Chapter 2

Assignment(s)

Quiz #1: Covering Chapter 1

Forum 2.

Assignment: Chapter 2

Week 3: GIS Outputs, Data representations: Identify, define, and describe rasters and vectors.

Learning Objective(s)

LO-3: This week we will learn about different data representations.

Reading(s)

Tutorial – Chapter 3

Assignment(s)

Forum 3

Assignment: Chapter 3

Week 4: File Geodatabases, Types of modeling: Identify and contrast descriptive, prescriptive and predictive models in GIS. Explain conditions of use and applicability.

Learning Objective(s)

LO-8: This week we will discuss the value of GIS to your field of discipline.

Reading(s)

Tutorial – Chapter 4

Assignment(s)

Mid Term Exam: Covers Ch. 2 - 3

Forum 4

Assignment: Chapter 4

Week 5: Spatial Data, Identify, locate, and describe the relevance of spatial data that are relevant to a student's field of interest., Explain scale, resolution and projection and discuss how these concepts relate to vector and raster data models.

Learning Objective(s)

LO-5: This week you will demonstrate how GIS is related to your relevant field of interest.

LO-6: This week we will learn how scale, resolution, and projection can affect data models.

LO-7: This week we will learn how to Apply cartographic principles of scale, resolution and projection to a problem of geographic nature.

Reading(s)

Tutorial – Chapter 5

Article by Dr DeMers

Assignment(s)

Forum 5

Assignment: Chapter 5

Week 6: Digitizing or creating your own information

Learning Objective(s)

Reading(s)

Tutorial – Chapter 6

Assignment(s)

Quiz #2: covering Ch 4 and Ch 5

Forum 6

Assignment: Chapter 6

Week 7: Geoprocessing, Apply cartographic principles of scale, resolution and projection to a problem of geographic nature.

Learning Objective(s)

LO-4: This week we will learn about different types of modeling in GIS and compare them to each other. As well as determine when to use each model

Reading(s)

Tutorial – Chapter 8

Assignment(s)

Forum 7

Assignment: Chapter 8

Week 8: Spatial Analysis, Course Review and Final Exam

Learning Objective(s)

We will be finishing up the course.

Reading(s)

Tutorial – Chapter 9

Assignment(s)

Final Exam: Covers Chapters 6 and 8 and will be posted this week under the “Exams” section of the classroom.

Forum 8

Assignment: Chapter 9

Evaluation

Instructional Approach and Course Requirements

This course will rely on the Tutorial for step-by-step instruction on how to perform the tasks assigned. For the most part the steps in the tutorial are well written and easy to understand. There are however steps in the text that have changed due to time. When these occur I note them in at least the Assignment for that week – I also tried to note these changes within the announcement for the week as well. Please follow my instructions when they differ from the tutorial instructions. If however, you have questions please let me know especially if the instructions involve going to Internet locations to download information.

It is important to complete all the assignments as they are assigned. If you get too far behind then you risk the chance of not being able to complete the exams. The information in the exams will come directly from the tutorial, my notes within the announcement, forums, or other readings as assigned. You may use the tutorial and software to assist you in these exams. When requested to submit items for the exam you must do so within the exam area. I will have more instruction on this when the first exam is released.

If at any time you have questions please email me via messages within the course; if I feel that the rest of the students can benefit from my answer I will reply to everyone. Chances are if you have a question about something within the course so does someone else. So ask if you need help or have a question.

Other Important Class Notes

This course will offer the student an interactive, asynchronous virtual classroom. Each week's lesson will have a course announcement, assigned readings, a project or homework, and other guidance provided by the instructor. Since the student is expected to fully participate in discussions and interact with the instructor and other students, reading assignments and assigned projects should be completed in a timely manner.

"Asynchronous" is not the same as "independent study" – all students are to participate in the weekly assignments and topics together, it is within that week where each individual has flexibility on completing the week's tasks.

The nature of an online course requires a significant amount of discipline and independent work. The student is responsible for managing time, completing assignments and notifying the Professor immediately of any difficulties. All assignments will have several days to weeks to complete therefore, extensions are not anticipated.

Each week begins on Monday and ends on Sunday, and all posted times are Eastern Time. Students are encouraged to carefully check due dates and times on exams so as not to miss a submission.

Forums

We can learn as much from each other as we will from the text or the assignments. The Forum is to facilitate our getting to know one another and sharing our thoughts about the weekly readings and assignments. The purpose for the forum is to reach out to each other and ask questions about the readings or the assignments. Look at this a kind of a delayed messenger or a forum. Ask questions when you have them and answer them if you may know the answer. I will monitor the forum constantly and answer questions as they arise.

For the first forum, all work must be completed by 11:55 PM ET Sunday of the first week. For the remaining forums, all initial posts are due by 11:55 PM ET Wednesday of the week assigned. All replies must be completed by 11:55 PM Sunday of the week assigned.

Assignments

The syllabus will indicate what the assignment is for that week. You can also see the assignments within the "Assignments"; however sometimes I will change the assignment a bit which the syllabus may not reflect. If the situation arises that the syllabus and the assignment as noted in the Assignment area differs always go with what is in the Assignment area; this will be the most current intended assignment.

Assignments will consist of working through the exercises in the text. I will determine which questions you will submit answers for when the assignment is released. I will review each of your answers and if your answer is incorrect I will let you know why. Please do not just work on the questions you need to submit to me when you are working on the assignment. It is possible that preceding questions will lead you to the correct answer for the question I am asking you to submit an answer for the assignment. It is also likely that the other questions will be on the exams as well.

When you submit your answers you will do so in your course folder that has been set up for you during the first week of the course.

Tests

There will be two quizzes and two exams. These tests are meant to capture your understanding of the material progressively and while it is fresh in your mind. Pace yourself based upon your knowledge of your lifestyle and work requirements. Keep me apprised of special situations.

The tests may have multiple choice, true/false, essay questions and exercises (that need to be submitted via

attachment). Read the questions slowly and thoughtfully, they are meant to measure your understanding of concepts, ideas, and terms that are complex in their shades of meaning.

Please Note: If you copy the test before submission as a study guide, you must be aware that the order of the all questions will scrambled each time you re-open the short exam or exam. This includes matching questions and answers if applicable. *Do not* just blindly paste or post the answers you have determined during your study preparation. Verify you are answering the right question!

Grading:

| Name | Grade % |
|----------------------------|---------|
| Assignments | 30.00 % |
| Week 1 - GIS Introduction | 3.75 % |
| Week 2 - Map Design | 3.75 % |
| Week 3 - GIS Outputs | 3.75 % |
| Week 4 - File Geodatabases | 3.75 % |
| Week 5 - Spatial Data | 3.75 % |
| Week 6 - Digitizing | 3.75 % |
| Week 7 - Geoprocessing | 3.75 % |
| Week 8 - Spatial Analysis | 3.75 % |
| Forums | 20.00 % |
| Week 1 Forum | 2.50 % |
| Week 2 Forum | 2.50 % |
| Week 3 Forum | 2.50 % |
| Week 4 Forum | 2.50 % |
| Week 5 Forum | 2.50 % |
| Week 6 Forum | 2.50 % |
| Week 7 Forum | 2.50 % |
| Week 8 Forum | 2.50 % |
| Exams | 30.00 % |
| Mid-Term | 20.00 % |
| Final Exam | 10.00 % |
| Quizzes | 20.00 % |
| Quiz 1 - Week 2 | 13.33 % |
| Quiz 2 - Week 6 | 6.67 % |

Materials

Book Title: GIS Tutorial 1: Basic Workbook, 10.1 Ed

Author: Gorr, Wilpen L. / Kurland, Kristen S.

Publication Info: ESRI

ISBN: 9781589483354

Book Title: You must validate your cart to get access to your hard copy book(s). If needed, instructions are available here - <http://apus.libguides.com/bookstore/undergraduate>

Author: N/A

Publication Info: N/A

ISBN: N/A

Required Technology

- See the Technology Requirements section of the undergraduate catalog for the minimum hardware and software requirements.
 - Microsoft Office 365 is available to APUS students for free. To sign up, visit <http://products.office.com/en-us/student>. If you have questions about accessing the software, please contact Classroom support at classroomsupport@apus.edu.
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Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- [Tutor.com](https://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not

copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- “Substantive” means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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