GIS 341: Introduction to Cartography and Georepresentation

Course and Faculty Information

Course Description: This course is an introduction to cartography – the art, science and technology of maps and map making. Students will learn the fundamental principles for map design and utilize computer software to produce maps to communicate geographic information clearly and effectively.

Credits: 3

Prerequisites: GIS 205 with C or better

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TA: Chen-Lun Kao

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Course Learning Outcomes

At the completion of this course, students will be able to:

- Use cartographic vocabulary to evaluate maps
- Organize spatial data for making maps
- Apply cartographic design principles to produce clear, meaningful, and effective maps
- Make informed choices about projection, scales of representation, symbology, color, texts, and overall layout of maps.

Course Materials

The majority of course materials are selected from the following books and websites. All readings will be posted as PDF files or website links on Canvas course site under each week's module.

Books:

- Brewer, Cynthia A. 2014. *Designing Better Maps: A Guide for GIS Users*. Second Edition. ESRI Press.
- Krygier, John, and Denis Wood. 2016. *Making Maps: A Visual Guide to Map Design for GIS*. 3rd ed. Guilford Publications.
- Peterson, Gretchen N. 2009. *GIS Cartography: A Guide to Effective Map Design.* CRC Press
- Price, Maribeth H. 2015. *Mastering ArcGIS*. McGraw-Hill Education.

Students are welcome (but not required to) purchase these books for their future study. Other cartographic websites will be provided in the page of "Learning Materials" under each week's module.

Course Access

Your ASU courses can be accessed by both my.asu.edu and myasucourses.asu.edu; bookmark both in the event that one site is down.

Computer Requirements

This is a fully online course; therefore, it requires a computer with internet access and the following technologies:

- Web browsers (Chrome, Mozilla Firefox, or Safari)
- Adobe Acrobat Reader (free)
- Adobe Flash Player (free)
- ArcGIS 10.3 or higher (free for ASU students)*
- Microsoft Office (Microsoft 365 is free for all currently-enrolled ASU students)
- Reliable broadband internet connection (DSL or cable) to stream videos.

* If you're an ASU Online student, you will have to install ArcGIS on your own computer. In that case, you will follow instructions sent by the instructor/TA to obtain a free student copy of the software. If you are an on-campus student, you can also access the software in the campus computing sites and in the School of Geographical Sciences and Urban Planning's computer lab, Coor 191.

Note: A smartphone, iPad, Chromebook, etc. will not be sufficient for completing your work in ASU Online courses. While you will be able to access course content with mobile devices, you must use a computer for all assignments, quizzes, and labs.

Help

For technical support, use the Help icon in the black global navigation menu in your Canvas course or call the ASU Help Desk at +1-(855) 278-5080. Representatives are available to assist you 24 hours a day, 7 days a week.

Student Success

To be successful:

- check the course daily
- read announcements
- read and respond to course email messages as needed
- complete assignments by the due dates specified
- communicate regularly with your instructor and peers
- create a study and/or assignment schedule to stay on track
- access ASU Online Student Resources

Grading

Evaluation of the course is based on four parts: ***Quizzes***, ***Map Critiques***, ***Labs***, and ***Discussion Participation***. Students will complete five quizzes, six map critiques, six labs, and participate in weekly discussion on the Discussion Forum. Detailed instructions will be provided under each week's module.

The total grade for this course is 350 points. Gradings is calculated based on the following components:

Grading Components	Total Points
Quizzes	70
Map Critiques	90
Labs	160
Discussion Participation	30

Your grade will be determined based on the following grading schema:

Grade	Minimum Percent
A+	98%
A	94%
A-	90%
B+	87%
B	84%
B-	80%
C+	77%
C	74%
C-	70%
D	60%
E	<60%

This course does not offer opportunities to earn extra credits. However, students have an opportunity to redo or refine one of the five labs. In the last week of the course, students can redo any one of their previous labs and submit a revised version for re-evaluation. Students who are satisfied with all their previous labs can give up this opportunity.

Course Schedule

The course contains six modules in a seven-week period. All modules will open to students at the beginning of the session. There will be weekly student activities, including quiz, lab and map critique, that are **due at the 11:59 PM on the *Friday* of the designated week**.

The following table is a summary of the course schedule:

Module	Topic	Quizzes	Map Critique	Labs
1	**Maps and Map Making**	Quiz #1	Critique #1	Lab #1
2	**Map Elements**	Quiz #2	Critique #2	Lab #2
3	**Data for Making Maps**	Quiz #3	Critique #3	Lab #3
4	**Symbology and Visual Variables**	Quiz #4	Critique #4	Lab #4
5	**Color and Text**	Quiz #5	Critique #5	Lab #5
6*	**Principles for Cartographic Design**	-	Critique #6	Lab #6 & Revising A Previous Lab

*Note: Assignments in this module have different due dates. Please make sure to check the module carefully to prevent late penalties.

Submitting Assignments

All assignments, unless otherwise announced, MUST be submitted to the designated area of Canvas. **The instructor will not accept assignments submitted via email.**

Assignment due dates follow the Arizona Standard time. Click the link to access the Time Converter to ensure that you account for the difference in Time Zones. Note that Arizona does not observe daylight savings time.

Grading Procedure

Grades reflect your performance on assignments and adherence to deadlines. Grades on assignments will be available within **72 hours** of the due date in the Gradebook.

Late or Missed Assignments

Students cannot post on discussion forum or take the quiz after the due date. Late submissions of labs and map critique are subject to a **10%** penalty per day until reaching 30% of the assignment grade. **No late labs and map critiques will be graded one week after the due date.**

Notify the instructor **BEFORE** an assignment is due if an urgent situation arises and you are unable to submit the assignment on time.

Follow the appropriate University policies to request an accommodation for religious practices or to accommodate a missed assignment due to University-sanctioned activities.

Communicating with the Instructor

Discussion Forum

There is a “Discussion Forum” under each week’s module for questions about readings, assignments and software. Prior to posting a question or comment, check the syllabus, announcements, and existing posts to ensure it's not redundant. Students are encouraged to respond to the questions asked by classmates, or share course-related resources or technical tips.

Email questions of a personal nature to the instructor.

Students can expect a response within 72 hours.

Email

ASU email is an official means of communication among students, faculty, and staff. Students are expected to read and act upon email in a timely fashion. Students bear the responsibility of missed messages and should check their ASU-assigned email regularly.

All instructor correspondence will be sent to your ASU email account.

ASU Online Course Policies

View the ASU Online Course Policies

Accessibility Statements

View the ASU Online Student Accessibility page to review accessibility statements for common tools and resources used in ASU Online courses.

Syllabus Disclaimer

The syllabus is a statement of intent and serves as an implicit agreement between the instructor and the student. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. Remember to check your ASU email and the course site often.