GEOG 1800
MAPPING OUR WORLD (CM)

Course Description

Social and environmental changes are occurring at alarming rates. Geographic data and mapping technology have revolutionized identifying, quantifying, analyzing, interpreting, and communicating change. Applying mapping technology has become an essential decision-making skill set in visualizing data, understanding and explaining complex situations, and communicating shared meaning.

- Textbook | The Power of Where by Jack Dangermond
- No Prerequisites
- Semester: All

Course Student Learning Outcomes

- Apply geographic data, geographic inquiry, mapping technology, and other geographic representations and technologies to create, construct, analyze, and communicate information.
- Identify how geographic inquiry can be used to communicate shared meaning using cartographic principles within the discipline.
- Analyze how mapping technology communicates spatial information visually and with other multimodal technologies, such as web maps, mobile apps, StoryMaps, etc.
- Create and change representations of Earth through datums, coordinate systems, and map projections.
- Analyze the complexities and challenges of communicating uncertainty in geographic data.
- Determine how implicit and explicit biases and assumptions occur when communicating geographic data and information.
- Evaluate how mapping technology is used to compare, interpret, analyze, and communicate physical or cultural environments using geospatial technology, geographic inquiry skills, and scientific reasoning.
- Analyze the spatial organization of people, places, and environments on Earth's surface.

General Education Information

This course fulfills the Communication general education designation at SLCC. Communication (CM) courses focus on the study and application of principles and skills in verbal, nonverbal, written, visual, and multi-modal forms of communication, focusing on the construction of shared meaning. CM courses combine the study of communication theory and disciplinary epistemologies with hands-on practice. These courses engage students in producing critical thinking and analysis,

argumentation, and communicative acts that enrich human relationships and that ground the epistemologies within our professions, disciplines, and shared spheres. While all general education courses have communication and reasoning elements, CM courses focus on systematically studying and producing communication and reasoning as generalizable human activities or within epistemologies specific to the discipline.

Communication Plan

I will respond to your emails within 48 hours and offer feedback on major assignments within one week of the due date. The best way to contact me is via the Canvas inbox, as I will prioritize this email over other modes of communication.

Additionally, I will participate in the discussion forums with you to share my perspective within the discipline and offer some nuances of interpretation that may not be present in your textbook.

Lastly, we'll hold small group Q&A sessions to learn from our peers (and faculty) on some of the more difficult units within the course.

Keys for Success

This syllabus represents an "agreement" between you and the instructor. It is designed to ensure course integrity and fairness and provides students with a clear understanding of course expectations. The instructor and students are expected to use the syllabus and schedule as a guide for the semester. Any deviation from the syllabus or schedule will be discussed and agreed upon by the instructor and students.

The course will take the entire Fall semester. Each week, you will have several assignments. These will include reading and answering quizzes on the readings, earning several ESRI Virtual Campus Certificates, learning map interpretation skills, creating or critiquing maps, participating in online discussions, and doing some professional career development.

It is designed to teach the information and skills required by discipline and to develop vital workplace skills, strategies, and lifelong learning skills. Education is more than acquiring facts; it uses information meaningfully to enrich one's life.

While each course's subject is essential and valuable, we become genuinely educated by connecting such varied information with the different methods of organizing human experience practiced by different disciplines. Therefore, combined with other courses, this course will enable you to develop broader perspectives and deeper understandings of your community, and the world and challenge previously held assumptions about the world and its inhabitants.

Course Procedure

Active participation in activities is expected. You will be expected to interact with others during class and participate in group discussions. Most of the assignments you complete for the course will be submitted online using Canvas LMS. There are also Canvas apps available.

All the mapping assignments will be done electronically using Esri's ArcGIS platform. The classroom has a computer lab if you want to use it, or students are encouraged to bring their laptops. All students will gain access to ArcGIS to download on a personal computer.

It is HIGHLY recommended you set up Canvas so it can send you messages to your email, cell phone, Facebook, or Twitter accounts. When your instructor sends out announcements, messages, and information on Canvas, you will be notified in the media you designate

Assignment Description

GIS Assignments

Each module will have a series of mapping activities to build knowledge, and skill sets in applying geographic information systems (GIS). The assignments will range in length and difficulty level, which will also determine the point structure for each assignment.

Module Quizzes

Each module will also have a quiz focusing on the learning objectives listed in that module. The open-book quizzes consist of ten randomly selected questions from an assessment database, and each quiz is worth ten points.

Exams

Three unit exams will focus on geospatial representation and GPS, geographic information systems, and remote sensing. Each exam consists of 50 randomly selected questions from Canvas, and students will have 60 minutes to complete it.

Grading Scale

GRADE	SCORE RANGE
A	100-94 percent
A-	93-90 percent66
B+	89-87 percent
B	86-84 percent
B-	83-80 percent
C+	79-77 percent
C	76-74 percent
C-	73-70 percent
D+	69-67 percent
D	66-64 percent
D-	63-60 percent
E	Less than 60 percent

Incomplete Grade Policy

If circumstances make you unable to complete the course in the regular time frame, you may work with the instructor to take an incomplete. Students must pass and have completed 75% of the

coursework to be granted an incomplete. Students are responsible for planning for successful course completion.

Assignment Schedule

Module 1 | Introduction to Geospatial Technology

- 1.1 Assignment | ArcGIS Online Accounts
- 1.2 Assignment | ArcGIS Online Basics
- 1.3 Assignment | Get Information from a GIS Map
- 1.4 Quiz | Module 1

Module 2 | Spatially Representing Earth

- 2.1 Assignment | Explore an Interactive Map
- 2.2 Assignment | Explore an Interactive App
- 2.3 Assignment | Explore a 3D App
- 2.4 Assignment | Explore Arcade Expressions in a Web Map
- 2.5 Assignment | Explore Paris with ArcGIS Online
- 2.6 Quiz | Module 2

Module 3 | Connecting Data to the Map

- 3.1 Assignment | The Power of Maps
- 3.2 Assignment | Make a Map of China
- 3.3 Assignment | Map the Highest Mountain
- 3.4 Assignment | Convert a List of Historic Places into a Map
- 3.5 Quiz | Module 3

Module 4 | Global Positioning Systems

- 4.1 Assignment | Finding Your Location with GPS
- 4.2 Assignment | Oversee Snowplows in Real-Time
- 4.3 Assignment | Location Privacy
- 4.4 Quiz | Module 4

Module 5 | Geospatial Data and GIS

- 5.1 Assignment | Access and Prepare Data for Mapping
- 5.2 Assignment | Map and Analyze Food Access
- 5.3 Assignment | Monitor Malaria Epidemics
- 5.4 Assignment | Mapping Hurricanes
- 5.5 Assignment | Manage Data
- 5.6 Quiz | Module 5

Module 6 | Spatial Analysis

- 6.1 Assignment | Visualize Inequality in Toxic Exposure Risk
- 6.2 Assignment | Investigate and Share Election Results
- 6.3 Assignment | Map Voter Data to Plan Your Campaign

- 6.4 Assignment | Solve a Spatial Problem
- 6.5 Quiz | Module 6

Module 7 | Cartographic Principles

- 7.1 Assignment | Symbolize by Size
- 7.2 Assignment | Create a Policy Map to Address Health Conditions
- 7.3 Assignment | Map and Chart Data
- 7.4 Quiz Z| Module 7

Module 8 | Remote Sensing

- 8.1 Assignment | Getting Started with Imagery
- 8.2 Assignment | Color Composite Imagery
- 8.3 Assignment | Using Global Imagery Basemaps
- 8.4 Assignment | Explore Imagery and Spatial Resolution
- 8.5 Assignment | Use Imagery in ArcGIS Online
- 8.6 Assignment | Reveal Lake Shrinkage Due to Severe Drought
- 8.7 Assignment | Visualizing Fire Damage
- 8.8 Assignment | Monitoring Fracking
- 8.9 Assignment | Get Started with Imagery for Africa
- 8.10 Assignment | Get started with Change Detection for Africa
- 8.11 Assignment | Go Further with Imagery for Africa
- 8.12 Quiz | Module 8

Transfer/Certification/Licensure/Employment Information

This course is required for those interested in the Earth and Environmental Science AS degree. The AS degree directly transfers to most four-year higher education institutions within Utah.

The Earth and Environmental Science Department also offers the following programs of study: GIS and Drones AAS, a GIS Certificate of Proficiency, and a Drones Certificate of Proficiency.

Institutional Policies

As members of our academic community, we would like to invite you to review the Institutional Syllabus, which covers important policies and procedures. This document contains important links for students on the code of student rights and responsibilities, academic integrity, grading policies, Title IX, and other important acknowledgments. By familiarizing yourself with this information, you can help us create a safe and respectful environment for everyone.

You can access the document by clicking on the following link: Institutional Syllabus

Learning Support and Tutoring Services

We are pleased to offer a range of tutoring and learning support services to help you achieve your academic goals. Whether you need assistance with a specific subject or want to improve your study skills, you have many options for tutoring or other support.

To learn more about the services we offer and how to access them, please visit the Institutional Syllabus under the Tutoring and Learning Support tab: Institutional Syllabus

We encourage you to use these resources to help you succeed in your studies. If you have any questions or would like to schedule a tutoring session, please don't hesitate to contact us. We are here to support you in any way we can.

Advising and Counseling Support Services

Our institution is committed to supporting your academic and personal growth. That's why we offer a range of advice and counseling services to help you navigate the challenges of college life. To learn more about the resources available to you and how to access them, please visit the Institutional Syllabus under the Advising and Counseling Support Services tab: Institutional Syllabus

Our advising team and the support centers across campus are here to help you achieve your goals and overcome any obstacles you may face.

Student Academic Calendar

As students, you should be aware of all important dates in the semester, such as the day that courses begin and end, as well as the drop date and the last day to withdraw. To learn more about those dates, navigate to the Student Academic Calendar: SLCC Student Academic Calendar