San José State University

College of Social Sciences, GEOG107: Mapping the World

Course and Contact Information

Instructor:	Dr. Xiangyu Ren
Office Location:	Online
Email:	xiangyu.ren@sjsu.edu
Office Hours:	**Wednesdays & Thursday, 11:59 am - 1:00 PM on Zoom** **Meeting ID: 823 7407 5699, Password: MapWorld25**
Class Days/Time:	Online (no scheduled meeting days or times)
Classroom:	Canvas
Prerequisites:	Passage of the Writing Skills Test (WST) or ENGL/LLD 100A with a C or better, completion of Core General Education, and upper division standing (60 units). Completion of, or co-registration in, 100W is strongly recommended
GE/SJSU Studies Category:	Area R: Earth & Environment
Units	3

Course Descriptions

Scientific understanding of the physical systems and processes of the Earth as explored through data visualization, and online mapping, and an introduction to spatial analysis. A comprehensive survey of all the regions studied in geography: North and South America, Africa, Europe, Asia, Australia, and the Pacific. In this survey of diverse global environments, students will create interactive web applications and story maps using ArcGIS Online to visually communicate the interrelationships between humans and their environment.

Course Format

This course is taught entirely online in an asynchronous format which means there are no scheduled meetings on Zoom. Students are required to have an electronic device (laptop, desktop, or tablet) with internet access. SJSU has a free equipment loan program available for

students. New course modules can be found on the Canvas Learning Management System at http://sjsu.instructure.com each Monday morning. Students are responsible for regularly checking the website for announcements and updates.

Course Goals

This course emphasizes neogeography to survey Earth's contrasting landscapes and human-environmental interactions by world region. Students will explore the digital Earth and conduct research and mapping to communicate stories of resource extraction, scarcity, insecurity, and environmental degradation while also celebrating innovation, conservation, and cultural authenticity. Course readings, multimedia, assignments, and online discussions provide a deeper understanding of the complex interrelationship between humans and their world while honing critical, relational, and contextual thinking through maps. By the end of the course, a student can expect to understand the use of maps and geographic data to explain themes and geographic patterns and be able to understand the complexity of regional and global environmental and socio-economic problems.

GE Learning Outcomes (GELO)

SJSU Studies Area R students will cultivate knowledge of the scientific study of the physical universe or its life forms. Students will understand and appreciate the interrelationship of science and human beings to each other.

Upon successful completion of this course, students should be able to:

- *GELO 1. Demonstrate an understanding of the methods and limits of scientific investigation.*

The story map, midterm, lab assignment, and other interactive assignments are designed to assess GELO 1. Assignment *Distinguish science from pseudo-science*, Assignment *Explore the ESRI ArcGIS Online Story Map*, and Assignment *Map Critique* demonstrate the methods of scientific investigation.

- *GELO 2. Distinguish science from pseudo-science*

The virtual fieldtrip, webinars, and assignments assess GELO 2. Assignment Distinguishes Science from Pseudo-Science.

- *GELO 3. Apply a scientific approach to answer questions about the earth and environment.*

The story map, map critiques, final story map projects, and assignments are designed to assess GELO 3, applying a scientific approach to answer questions about the earth and environment.

Required Materials

The main study materials of this course are the reading pages provided on Canvas. These reading pages contain multiple online maps and geospatial data visualization that students can interact with. Students are required to go through the webs and online maps.

Another study material is the textbook. To reduce cost this course is taught using open-source textbooks, below is the free resource of the digital textbook. Please only use it for study.

- *Guo, Haudong, Goodchild, Michael, and Annoni, Allesandro 2020. Manual of Digital Earth. Springe*

The other recommended textbook of World Regional is below (available for purchase or by library loan in paperback, ebook, and audiobook formats).

- *Geography: Realms, Regions and Concepts (2010) 14th Edition by Harm J. de Blij , Peter O. Muller*

Technology

Students will use online software and applications this term.

- **ESRI ArcGIS Online** is used for lab assignments. An ESRI ArcGIS Online account login will be provided to your SJSU email during the first week of class. You can log in to the SJSU ArcGIS online portal https://sjsugis.maps.arcgis.com/ using your SJSU 9-digit ID. ArcGIS Online is software that is accessible via the internet across platforms and devices. ArcGIS Online also provides the Story Mapping template to create the term project. http://arcgisonline.com.

- **ESRI ArcGIS StoryMaps** will be used for the final project. Students will develop their online story map using this online app. Free access for SJSU students.

- **Google Earth** will be used frequently to explore the world's regions in each module.

- **MapSwipe** is the phone application that students will experience satellite data digitalization. Playing MapSwipe provides valuable data for humanitarian and emergency response efforts. http://mapswipe.org

Course Requirements and Assignments

SJSU classes are designed such that to be successful, it is expected students will spend, for each unit of credit, a minimum of 45 hours over the length of the course (normally three hours per unit

per week) for instruction, preparation/studying, or course-related activities, including but not limited to internships, labs, and clinical practice. Other course structures will have equivalent workload expectations as described in the syllabus.

Learning Modules

Each learning unit will be open to you at the starting date as shown on the course schedule and will remain available to you until the end of the course. **However, the quizzes and assignments in each module must be completed by the given due time for full points. Assignments submitted after the due time will be penalized 5 points per week late,** and will not be accepted for evaluation after 2 weeks. Please note this policy and arrange your time to study the modules and take the assignments accordingly.

For each module, you should go through the read of the corresponding chapter in the textbook and explore the online story maps or Google Earth provided to you in the supplemental material. Each module is finished with a short quiz to check your understanding of the material. These module quizzes will be multiple-choice questions and will not be timed. Questions of the module quizzes are aimed to check if you achieved these learning objectives.

Assignments

- Active online participation means completing all readings, regional explorations, and course **assignments** provided in the weekly learning module (GELO 1, 2, 3). Assignments are described on the course schedule but know that more detailed instructions will be announced each Monday on Canvas in a new module. Frequent online engagement with this course is expected in order to be successful.
- Exposure to and engagement with the larger geography discipline is important for formulating a breadth of spatial understanding. As such a **virtual field trip** to the Stanford University David Rumsey Map Library and several **guest lecture webinars** have been assigned and will have prompts requiring written essay responses; both webinars will be recorded and posted to Canvas.
- Each student will select a regional Earth and Environment topic of interest that can be digitally mapped (choices may range from geomorphology, climate change, biogeography, oceanography, ecological, conservation, hydrology or water quality, resource extraction, conservation, land use, etc) and will work over the term **to create a compelling and original story map using ArcGIS Online and StoryMaps.** Effective cartographic visualization is an imperative skill in geography that can be applied to nearly every discipline and industry. Creating a powerful story means weaving factual scientific data with map layers, narratives, [real-time or recorded] multimedia, imagery and sounds. When completed properly these stories contribute to a larger digital globe where audiences can traverse the Earth's landscape in ways no paper map or atlas allows.

Students will peer-review and critique classmate story map submissions each week and be expected to incorporate feedback into the final map.

Midterm

Google Earth, Google Street View, and Google Maps are incredible resources for understanding the Earth but posting imagery with coordinates online can be controversial. In a written essay argue whether storing this immense visual and spatial data record is beneficial or invades privacy (1000 words).

Final Project

The final project of a comprehensive ArcGIS online story map replaces a traditional term paper but still requires considerable research and writing on a regional phenomenon worthy of greater public attention. At a minimum of 3,000 words, properly cited using APA format, the story map project is a substantial grade in this course (30% of the total). Students may only use reputable, high-quality GIS layers created by government agencies, nonprofits, academic departments, libraries, and the ArcGIS Online Living Atlas in their creations. These compiled sources must be credited and captioned appropriately to avoid plagiarism.

Grading Information

Assignments	**Points Possible**	**Assessment**
Eleven (11) Assignments	360	GELO 1, 2, 3
Ten (10) Quizzes	150 (15 each)	GELO 1
Three (3) Story Map Critiques	90 (30 each)	GELO 1, 2, 3
Midterm	100	GELO 1
First Story Map Submission	100	GELO 1, 2, 3
Final Story Map Submission	200	GELO 1, 2, 3
TOTAL	**1000**	

SCALE:

Grade	*Points*	*Percentage*
A plus	*980 to 1000*	*98 to 100%*
A	*930 to 979*	*93 to 97%*
A minus	*900 to 929*	*90 to 92%*
B plus	*860 to 899*	*86 to 89 %*

B	*830 to 859*	*83 to 85%*
B minus	*800 to 829*	*80 to 82%*
C plus	*760 to 799*	*76 to 79%*
C	*730 to 759*	*73 to 75%*
C minus	*700 to 729*	*70 to 72%*
D plus	*660 to 699*	*66 to 69%*
D	*600 to 659*	*60 to 66%*
D minus	*500 to 599*	*50 to 59%*
F	*Less than 500*	*<=50%*

All students have the right, within a reasonable time, to know their academic scores, review their grade-dependent work, and be provided with explanations for determining their course grades. In keeping with this policy, and to make grading responsive. All assignments are due as stated on the Course Schedule and Canvas. Please save all your work until after you have checked your final course grade.

Grading Information for GE

Passage of the Writing Skills Test (WST) or ENGL/LLD 100A with a C or better (C- not accepted), and completion of Core General Education are prerequisites to all SJSU Studies courses. Completion of, or co-registration in, 100W is strongly recommended. A minimum aggregate GPA of 2.0 in GE Areas R, S, & V shall be required of all students. Area R courses have a minimum of 3,000 words of writing in a language and style appropriate for the discipline.

Academic Dishonesty

Plagiarism in any form is referred to the Student Conduct and Ethical Development office and depending on the severity of the conduct, will receive a zero on the assignment or a grade of F in the course. Grade Forgiveness does not apply to courses for which the original grade was the result of a finding of academic dishonesty. unacceptable and will merit a 0 for the assignment. Students who are suspected of cheating during an exam will be

University Policies

Per University Policy S16-9 *(http://www.sjsu.edu/senate/docs/S16-9.pdf)*, relevant university policy concerning all courses, such as student responsibilities, academic integrity, accommodations, dropping and adding, consent for recording of class, etc. and available student services (e.g. learning assistance, counseling, and other resources) are listed on Syllabus Information web page (http://www.sjsu.edu/gup/syllabusinfo), which is hosted by the Office of Undergraduate Education. Make sure to visit this page to review and be aware of these university policies and resources.

GEOG107 Mapping the World class schedule

This schedule is subject to change with fair notice so please refer to Canvas often for announcements.

Date	Topics, Readings, Assignments
Getting Started	• Welcome to GEOG107 Mapping the World • Read the syllabus, familiarize yourself with the course and Canvas system • Setup your AcrGIS Online software accounts • Assignment: Introduce yourself & make a bold guess in a geographic quiz. • Help Forum
Module 0:	Regional Geography Basics • Online Explore: Get acquainted with interactive story maps. • Hebblewhite_Distinguishing technology from biology a critical review of the use of GP ecology.pdf • Read: Gou Chapter 1 – Understanding Digital Earth • Assignment. Explore the ESRI ArcGIS Online Story Map
Module 1:	EUROPE • Europe.pdf • Important learning points - Europe • Online Explore: Europe with interactive visualization • Read: Gou Chapter 2 – Digital Earth Platforms • Recorded Lecture: Introduction to ArcGIS Online and quick mapping demo • Lab: Making maps using ArcGIS Online • Quiz
Module 2:	SUB-SAHARAN AFRICA • SUB-SAHARANAFRICA.pdf • Important learning points - Sub-Saharan Africa • Online Explore: the Urban Africa story maps • Online Explore: Google Earth virtual explorations to Africa • Jean_Combining satellite imagery and machine learning to predict poverty.pdf • Read Guo Chapter 14 – Digital Earth for Climate Change • Quiz • Assignment: Story Map Topics Signup • Assignment: Play MapSwipe App
Module 3:	RUSSIA & CENTRAL ASIA • Russia_CentralAsia.pdf • Important learning points - Russia & Central Asia

Date	Topics, Readings, Assignments
	• Online Explore: "Walk" with Paul Salopek through storymap of his 10-year trek on foo • Online Explore: Google Earth Virtual Explorations • Read: Gou Chapter 3 – Remote Sensing Satellites for Digital Earth • Quiz • Lab: Design symbology for a thematic map
Module 4:	GEOTECHNOLOGY & PSEUDOSCIENCE • Read Guo Chapter 7 – Geospatial Information Visualization and Extended Realities • Reading materials about pseudoscience • Assignment: Distinguish science from pseudo-science.
Module 5:	SOUTH ASIA • SOUTH_ASIA.pdf • Important learning points - South Asia • Online Explore: Explore the South Asia story map • Online Explore: Explore Mt Everest in 3D • Lab: Mapping the highest mountains • Quiz
Module 6:	EAST ASIA & SOUTHEAST ASIA • EAST_ASIA_SOUTHEAST_ASIA.pdf • Important learning points - East Asia & Southeast Asia • Online Explore: Walk through China with Paul Salopek • Online Explore: Google Earth & StoryMaps Virtual Explorations-East Asia • Read Guo Chapter 22 – Digital Earth in China • Quiz • Assignment: Virtual Fieldtrip to the David Rumsey Map Library at Stanford University
Module 7:	MID-TERM • Read: Guo Chapter 12 – Social Media and Social Awareness • Mid-term Essay
Module 8:	MIDDLE AMERICA & THE CARRIBEAN • Middle_America.pdf • Important learning points - Middle America • Google Earth Virtual Explorations-MIDDLE AMERICA • Read Gou Chapter 4 – Satellite Navigation • Quiz • Story Map Instructions • Recorded Lecture: Introduction of StoryMaps app and demo

Date	Topics, Readings, Assignments
	• Assignment: First Submission of Story Map
Spring Recess	No class
Module 9:	NORTH AMERICA • NORTH_AMERICA .pdf • Important learning points - North America • Online Explore: Explore Canada's Original Place Names • Online Explore: Explore Story map of Geography of Wine and Yosemite's El Capitan • Read Guo Chapter 17 – Digital Heritage • Lab: ArcGIS online with Living Atlas • Quiz • Map Critique 1: Story Map Topic 1&2 Discussion
Module 10:	SOUTH AMERICA • SouthAmerica.pdf • Important learning points - South America • Online Explore: Google Earth Virtual Explorations-South America • Quiz • Lab: Build a 3D model online
Module 11:	AUSTRALIA, OCEANIA & ANTARTICA • AUSTRALIA_OCEANIA_ANTARCTICA.pdf • Online Explore: Google Earth & StoryMaps Virtual Explorations-Australia, Oceania & • Important learning points - Australia, Oceania & Antarctica • Read Guo Chapter 24 – Digital Earth Education • Quiz • Map Critique 2: Story Map Topic 3 & 4 Discussion
Module 12:	NORTH AFRICA, SOUTHWEST ASIA & CENTRAL ASIA • NORTHAFRICA_SOUTHWESTASIA .pdf • Online Explore: Virtual Explorations-North Africa & Southwest Asia • Important learning points - North Africa & Southwest Asia • Read Guo Chapter 13 – Digital Earth for Sustainable Development • Quiz • Map Critique 3: Story Map Topic 5
Module 14:	Final Due May. 12. • From Jupyter to Story Maps • Try to add a swipe block to your story

Date	Topics, Readings, Assignments
	• Nine steps to great storytelling • How to Make Citation and Avoid Plagiarism? • Final Project: The Final Version of Your StoryMap Submission