San José State University
College of Social Sciences, Department of Urban and Regional Planning
GEOG107: Mapping the World, Fall 2021

Course and Contact Information

Instructor:	Dr. Bo Yang
Office Location:	WSQ 113-A
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Office Hours:	Mondays 10:30 AM - 12:30 PM on Zoom (link) and by appointment
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 Description

Scientific understanding of the physical systems and processes of Earth as explored through data and mapping, , and an introduction to spatial analysis. 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 online 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 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 socioeconomic 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, and assignments are designed to assess GELO 1. Assignment #2 specifically addresses the limits and assignment #3 demonstrates the methods of scientific investigation.

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

  The virtual fieldtrip, webinars, and assignments assess GELO 2. Assignment #7 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 exam, and assignments are designed to assess GELO 3. Assignment #3 applies a scientific approach to answer questions about the earth and environment.

Required Materials

This course takes advantage of two free digital textbooks.

1) Burgalee, Royal *World Regional Geography: People, Places and Globalization*. Saylor
2) Guo, Haudong, Goodchild, Michael, and Annoni, Allesandro 2020. *Manual of Digital Earth.* Springer

Technology

Students will use online software and an app this term
1) An ESRI ArcGIS Online account login will be provided to your SJSU email during the first week of class. You can login the SJSU ArcGIS online portal https://sjsugis.maps.arcgis.com/ using your SJSU 9-digit ID. ArcGIS Online is a 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.
2) Download MapSwipe. It is a mapping 'game' for phones and tablets where users identify roads and structures in satellite imagery. Playing MapSwipe provides valuable data for humanitarian and emergency response efforts across the Earth. http://mapswipe.org
3) Google Earth will be used frequently to explore the world regions.

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 practica. 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 remain available to you by 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 10% per day late, and will not be accepted for evaluation after seven days. 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 story maps or Google earth provided to you in the supplemental material. Each module is finished by 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

1) 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 scheduled 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.

2) Exposure to and engagement with the larger geography discipline is important for formulating a breadth of spatial understanding. As such a **virtual fieldtrip** to the Stanford University David Rumsey Map Library and two **guest lecture webinars** have been assigned and will have prompts requiring 500-word written essay response; both webinars will be recorded and posted to Canvas.

3) 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**.** 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 (40% of the total). Students may only use reputable, high-quality GIS layers created by government agencies, nonprofits, academic departments and libraries, and the ArcGIS Online Living Atlas in their creations. These compiled sources must be credited and captioned appropriately to avoid plagiarism.

Extra Credit Opportunity

Throughout the course, I may offer extra credit opportunities to students such as writing a short reaction paper about a topic, or participating in a discussion forum etc. Such opportunities will be announced on Canvas and sent to you through email.

Written Communication and Information Literacy Assessment Fall 2021

This semester SJSU is assessing written communication and information literacy skills of students pursuing undergraduate degrees. The assessment is used to evaluate effectiveness of our General Education and writing curricula. This class has been selected for collection of student sample work. I will select random samples of work from this class to provide to a team of assessment experts. The work will be anonymized and cannot be traced back to you. The assessment will be done after the semester is over and will not affect your grade. Please let me know if you prefer to have your work excluded from this process.

Grading Information

Assignments	Points Possible	Assessment
Twelve (10) Assignments	200 (20-each)	GELO 1, 2, 3
Ten (10) Quizzes	100 (10-each)	GELO 1
Six (6) Story Map Critiques	120 (20-each)	GELO 1, 2, 3
Two (2) Geography Webinar Events	80 (40-each)	GELO 2
Midterm Exam	100	GELO 1
First Story Map Submission	100	GELO 1, 2, 3
Final Story Map Submission	300	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, to review their grade-dependent work, and to be provided with explanations for the determination of their course grades. In keeping with this policy, and to making 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 prerequisite 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, Fall 2021

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

Date	Topics, Readings, Assignments
Module 0: 8/18-8/22	GETTING STARTED 1. Read the syllabus 2. Familiarize yourself with the course Canvas system 3. Setup your AcrGIS Online software accounts and apps Assignment 1: Introductions and self-introduction on the discussion board

Module 1: 8/23-8/29	REGIONAL GEOGRAPHY BASICS
	1. Read: Saylor Chapter 1 – Introduction to the World
	2. Read: Gou Chapter 1 – Understanding Digital Earth
	3. Get acquainted with interactive story maps as an educational, visual communication, and spatial literacy tool.
	    • Read the five principles of effective storytelling
	    • Read how to make a story map
	Assignment 2: Explore the ESRI ArcGIS Online Story Map Gallery and write a 250-summary explaining why this was a captivating story map and discuss the limits of scientific investigation in the case.

Module 2: 8/30-9/5	EUROPE 1. Read: Gou Chapter 2 – Digital Earth Platforms 2. Read: Saylor Chapter 2 3. Review Summary Slides about Europe, complete quiz 1 4. Signup for a Story Map Topic Assignment 3: Making maps using ArcGIS Online
Module 3: 9/7-9/12	RUSSIA 1. Read: Saylor Chapter 3 2. Read: Gou Chapter 3 – Remote Sensing Satellites for Digital Earth 3. Review Summary Slides about Russia, complete quiz 2 4. Embark on regional virtual explorations linked to Canvas module, Use Google Maps to explore satellite images of arctic melting, energy drilling, the Siberian tundra, Chernobyl. Assignment 4: Design symbology for a thematic map.
Europe or Russia ArcGIS Online Story Maps Due by 11:59 pm on 9/13	
Module 4: 9/13-9/19	MIDDLE AMERICA & THE CARRIBEAN 1. Read: Saylor Chapter 5 2. Read: Gou Chapter 4 – Satellite Navigation 3. Read: Zook et al. Volunteered Geographic Information and Crowdsourcing a Disaster Relief: A Case Study of the Haitian Earthquake (linked to Canvas) 2. Review the Summary Slides about Middle America & the Caribbean, complete quiz 3 3. Embark on a virtual exploration of hurricanes, the Panama Canal, and invasive species Assignment 5: Using real-time weather data to predict weather in ArcGIS online

Date	Topics, Readings, Assignments
Module 5: 9/20-9/26	SOUTH AMERICA 1. Read Saylor Chapter 6 2. Read Guo Chapter 14 – Digital Earth for Climate Change 3. Review the Summary Slides about South America, complete quiz 4 4. Use Google Earth to explore the Amazon River basin, Atacama Desert, Andes, and Galapagos biogeography (step-by-step instructions linked to Canvas module) Assignment 6: Virtual Fieldtrip to the David Rumsey Map Library at Stanford University. Select your favorite historical and contemporary physical geography maps on display and post a selfie. Map Critique 1: Write a 300-word critique about one of Europe or Russia ArcGIS Online Story Maps
Middle America or South America ArcGIS Online Story Maps Due by 11:59 pm on 9/28	
Module 6: 9/27-10/3	GEOTECHNOLOGY & PSEUDOSCIENCE 1. Read: Guo Chapter 12 – Social Media and Social Awareness Game: Play MapSwipe to crowdsource features for future humanitarian mapping efforts Assignment 7: Maps revealing with scientific facts will be shown against those created from pseudo-science. Students can choose one example and explain the bias and misinformation presented along with its larger implications to society.
Module 7: 10/4-10/10	SUB-SAHARAN AFRICA 1. Read: • Jean, Neal et al. Combining satellite imagery and machine learning to predict poverty • Hebblewhite, Mark and Daniel Haydon. Distinguishing technology from biology: a critical review of the use of GPS telemetry data in ecology • Saylor Chapter 7 2. Review Sub-Saharan Summary Slides, complete quiz 5 3. Embark on regional virtual explorations linked to Canvas module. Explore the urban Africa story map, compare the urbanization processing in Africa. Map Critique 2: Write a 300-word critique about one of the Middle America or South America ArcGIS Online Story Maps.
Module 8: 10/11-10/17	MIDTERM Submit your midterm exam essay by @ 11:59 pm on 10/17
Module 9: 10/18-10/24	NORTH AFRICA, SOUTHWEST ASIA & CENTRAL ASIA 1. Read Saylor Chapter 8 2. Read Guo Chapter 13 – Digital Earth for Sustainable Development 3. Review the Summary Slides, complete quiz 6 4. Embark on regional virtual explorations linked to Canvas module 5. Guest lecture from Dr. Ahoura Zandiatashbar Webinar 1: Attend the webinar (live or recorded) SJSU Center for Spatial Analytics and Data Visualization (SAVI) hosts two speakers each term. Submit a list of new factual information gained from the speaker

Date	Topics, Readings, Assignments
Sub-Saharan, North Africa & Southwest Asia ArcGIS Online Story Maps Due by 11:59 pm on 10/26	
Module 10: 10/25-10/31	SOUTH ASIA 1. Read Saylor Chapter 9 2. Read Guo Chapter 7 – Geospatial Information Visualization and Extended Realities 3. Read Gillespie et al. Finding Osama bin Laden: An application of biogeographic theories and satellite imagery. 4. Guest Lecture from Dr. Laxmi Ramasubramanian 5. Review the South Asia Summary Slides, complete quiz 7 6. Explore Mt Everest in 3D: Experience the trek to the summit, virtual exploration of the south Asian story map Assignment 8: ArcGIS Online Assignment. Import and digitizing the external geographical data to an ArcGIS online layers, customize the layer to display with text and elevation of the topography and mountains.
Module 11: 11/1-11/7	EAST ASIA & SOUTHEAST ASIA 1. Read Saylor Chapters 10 and 11 2. Read Guo Chapter 22 – Digital Earth in China 3. Review the Summary Slides, complete quiz 8 4. Guest lecture from Dr. Bo Yang 5. Embark on regional virtual explorations linked to Canvas module. Map Critique 3: Write a 300-word critique about one of Sub-Saharan, North Africa & Southwest Asia ArcGIS Online Story Maps.
South Asia, East Asia & southeast Asia ArcGIS Online Story Maps Due by 11:59 pm on 11/9	
Module 12: 11/8-11/14	NORTH AMERICA 1. Read Saylor Chapter 4 2. Read Guo Chapter 17 – Digital Heritage 3. Guest lecture from Dr. Kerry Rohrmeier 4. Review the North American Summary Slides, complete quiz 9 5. Explore Story map of Geography of Wine. Think about how you want use story map to unfold ideas and inspiration. Map Critique 4: Write a 300-word critique about one of the East and Southeast Asia Story Maps. Assignment 9: ArcGIS Online Assignment, use datasets available through ArcGIS Living Atlas to bring together existing maps and scenes using web apps. Integrate these apps into a story that can be shared with the public.
North America, Australia, Oceania & Antarctica ArcGIS Online Story Maps Due by 11:59 pm on 11/16	
Module 13: 11/15-11/21	GEOGRAPHY AWARENESS WEEK / GIS DAY Celebrate geography as a fascinating and varied academic discipline by participating in SJSU campus events! Assignment 10: View and Vote on the SJSU Student Story Map showcase. What were the cartographic standards which made this map compelling? (300-words) Webinar 2: Watch the SJSU GIS Day speaker. Submit a list of new factual information gained from the speaker

Date	Topics, Readings, Assignments
Module 14: 11/22-11/28	THANKSGIVING WEEK Use this week to revision to your Story Map for final submission based on instructor and student feedback.
Module 15: 11/29-12/5	AUSTRALIA, OCEANIA & ANTARCTICA 1. Read Saylor Chapters 12 and 13 2. Read Guo Chapter 24 – Digital Earth Education 3. Review the Summary Slides, complete quiz 10 4. Use Google Earth to explore coral Bleaching in the Great Barrier Reef, Emperor Penguin habitat in Antarctic, and trace the peopling the South Pacific and Easter Island Map Critique 5: Write a 300-word critique about one of the North America, Australia, Oceania & Antarctica ArcGIS Online Story Maps.
Revised Story Map Due by 11:59pm on 12/5	
Final:	FINAL EXAM Submit your Final Draft of your Story Map by 11:59 pm on 12/7