

## **GSS 317 Geospatial Narratives: Deep Mapping for Humanities and Social Sciences**

Online Sync/Async Combined

Synchronous Zoom: 4:25 pm - 5:45 pm (Wednesday)

**Instructor:** Sung-Gheel (Gil) Jang, PhD

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**Office Hours via Zoom:** 11 am – 12:30 pm (Tuesday and Thursday) **by appointment.**

*Because **this is an online course**, I will be available to answer questions via either e-mail anytime or Zoom by appointment. If you use email, you may expect my response within 24 hours (in most case, it will be much faster).*

The instructor will be monitoring the weekly Q & A forum in **Discussions** on Blackboard. If your question is related to the class materials, use the weekly Q & A forum first. This will give your classmates a chance to help you.

### **Course Description:**

Building on formal methods in qualitative reasoning, spatial and temporal representation and geospatial science, this course will explore state-of-the-art methods for humanities and social sciences students to visualize and drill down data. After covering the fundamental underpinning of GIS concepts and technologies, the course will introduce the way of constructing geospatial narratives of place-based events. Hands-on exercises of deep mapping will cover how to collect, analyze and visualize quantitative and qualitative data, spatial data, images, video, audio, and other representations of places and artifacts in humanities and social sciences. This course will also discuss models of reasoning about events, actions and changes that are spatially contextualized. This course will qualify as equivalent to GSS 313. (*Prerequisite:* WRT 102) *Advisory Prerequisite: some working knowledge of spreadsheets.*

**SBC:** TECH

### **Additional Course Information:**

In this course you will process, analyze, and visualize spatial data and information that is relevant to studies in the humanities and social sciences using both commercially available GIS software and online GIS services. As a result, you will gain an appreciation for the complexities of data manipulation, analysis, and mapping at different scales of space and time. The course includes lectures, hands-on exercises and projects, and **requires significant out of class work**. This is a computer and project-based course with the majority of student work involving the ArcGIS Online service and the ArcGIS Pro software.

### **Required Technologies:**

This is a **sync/async combined online course** which means you are required to participate in both asynchronous online learning at your own pace and synchronous virtual Zoom sessions during the scheduled time (4:25 pm to 5:45 pm, Wednesday). To complete this course successfully, you *must* have a computer (PC or Mac) with stable Internet connection. Students are expected to have a working knowledge of the Microsoft Windows operating system, including the file management skills (copy, move, [zip and unzip files](#), etc.).

You will also need the following software or services:

- A web browser: Chrome, Firefox, Safari, Windows Edge etc.
- A PDF viewer like Adobe Acrobat Reader or Preview
- Zoom app and your Stony Brook Zoom account: see [this site](#)
- ArcGIS Online and ArcGIS Pro 2.6 or higher: the instructor will provide the information about how to access this service and software. If you are a Mac user, you may want to use either the [Remote SINC site](#) [Recommended] or the [Virtual SINC site](#) (use the ‘VSS-3D-Apps’ virtual machine) to use ArcGIS Pro.

### Course Learning Objectives:

Upon completion of this course, students will be able to:

- Understand how digital maps can provide effective framework for exploring, curating, understanding historical events over time
- Understand the purposes of mapping, recognize the elements of cartographic representation, and how digital maps work
- Create digital maps reflecting the purpose, content and function of map data
- Use GIS software and/or online GIS services to produce accurate, appropriate, convincing and creative maps that can tell stories
- Use digital mapping methods for exploring, critiquing, confirming, and presenting artifacts and geospatial relationships among them
- Acquire and prepare different types of data for mapping
- Understand how various types of numeric and qualitative information is symbolized
- Use querying techniques, searches and spatial analytics
- Demonstrate an ability to apply technical tools and knowledge to practical systems and problem solving
- Design, understand, build, or analyze selected aspects of the human-made world.

**Course Load:** This three-credit course may require weekly *10 to 12 hours* for completing readings, hands-on exercises and assignments.

### Required Textbook:

There is no required textbook. Reading materials from various resources will be available on Blackboard.

### Recommended Resources:

Michael Law and Amy Collins (2020), *Getting to Know ArcGIS Pro 2.6*, Third edition, Esri Press. E-book: <https://www.vitalsource.com/referral?term=9781589486362>.

Mark Monmonier (2018), *How to Lie with Maps*, Third edition, University of Chicago Press.

Longley, P. A., Goodchild, M. F., Maguire, D. J., & Rhind, D. W. (2015), *Geographic Information Science and Systems*, Fourth edition, John Wiley & Sons.

Mark Monmonier (1993), *Mapping It Out: Expository Cartography for the Humanities and Social Sciences*, University of Chicago Press.

## Course Requirements

### 1. Attendance of the synchronous Zoom sessions (5%)

### 2. Online Discussion Activity (15%)

In this class, **Discussion Boards** on Blackboard will be a formal graded assignment. Within the **Discussion Board I** will establish a number of topical **Forums** where you will participate for a grade. Each of these **Forums** will have one or more leading questions, and you will create a new thread for your response. Additionally, you should comment on at least TWO posts of your classmates. Responses should be critical and supported. That does not mean degrading, but critical in the sense of exploring the positive or negative aspects of the comment, and then supporting your agreement or disagreement based on the assigned readings or other reliable sources. Why do I ask you to comment on your classmates' posts? The Discussion Board is our online version of a class discussion even if we are not actually in class.

Each topic will be separated in the Discussion Board on Blackboard so that you can easily post, review, and comment. I expect your first post in 150 to 200 words, and your comment on peer post in 100 to 150 words.

There is nothing as encouraging as having a classmate comment on the discussion you spent time sweating over. Be polite! You are graded on responses. One or two words, such as "I agree" is not enough. Explain your comments.

#### *General Discussion Board Etiquette:*

- Use proper English and grammar in discussion forums. Do not use text message abbreviations or any shortcuts that everyone in the class (including the Instructor) may not understand.
- I am not grading you on spelling but do the best you can (you should always create your response in a Word document, spell and grammar check, then copy and paste for your post).
- Use proper terms, if you are unsure of the term look it up in your text or try an online glossary.

***Discussion Forums are graded using the following scale: 4 = posted substantive thoughts (150-200 words) on the given discussion question by the instructor, and critically commented on at least two peer's posts; 3 = posted substantive thoughts, and yet minimally commented on two (or less) peer's posts; 2 = posted some thoughts but not substantively and/or minimally commented on two (or less) peer's posts; 1 = met a part of the requirements, demonstrating minimum efforts; 0 = did not post at all.***

### 3. Hands-on Exercises (40%)

All students should complete hands-on exercises that will be assigned each week. The hands-on materials come from various sources including the instructor or GIS tutorials. You should submit the assignment to a designated drop box in the Assignments on Blackboard. ***Each hands-on submission will be graded using the following scale: 2 = complete, satisfactory; 1 = complete, need improvement; 0 = incomplete.***

**4. Online Quizzes (5%)**

You will have four or five online quizzes based on the assigned readings (no more than 10 questions per each quiz). The test format is open-book and not timed. However, you must complete the quiz in one sitting once started. The purpose of the quiz is to help you self-assess your understanding of the assigned readings. Several quiz questions may challenge students' ability to think beyond what they have read.

**5. Final Project Proposal (5%)**

In lieu of final exam, you will be asked to complete a final Story Map project. The Story Map projects by former students are available for your information on Blackboard. Following the guidelines on Blackboard, the deadline of your proposal submission is **by 11:59 p.m. April 27<sup>th</sup>**.

**6. Final Project (30%)**

A **final Story Map project** is required and completed **by 11:59 p.m. May 16<sup>th</sup>**. This final project can be done by either a teamwork (maximum two students) or an individual work. The guidelines and the grading rubric will be posted on Blackboard.

**Grading Scale:** 100-93 (A); 92-90 (A-); 89-87 (B+); 86-83 (B); 82-80 (B-); 79-77 (C+); 76-73 (C); 72-70(C-); 69-67 (D+); 66-60 (D); below 60 (F)

**Course Schedule \*\*\* Subject to Change \*\*\***

Week	Date	Topic	Reading
1	2/3	Course overview Maps in the Humanities and Social Sciences  <i>Hands-on:</i> Mental Maps	Monmonier (1993) Ch1 <a href="#">ArcGIS Book, Ch1</a>
2	2/10	Scale, perspective, and generalization  <i>Hands-on:</i> Getting started with ArcGIS Online	Monmonier (1993) Ch2; Monmonier (2018) Ch3
3	2/17	Representing geography  <i>Hands-on:</i> Getting familiar with ArcGIS Pro	Longley et al. (2015) Ch 3
4	2/24	Geo-referencing  <i>Hands-on:</i> Mapping in ArcGIS Pro	Longley et al. (2015) Ch 4

Week	Date	Topic	Reading
5	3/3	Map data <i>Hands-on:</i> Mapping tabular data	Krygier & Wood (2005) Ch 3 <a href="#">ArcGIS Book, Ch4</a> <a href="#">ArcGIS Book, Ch8</a>
6	3/10	Visual variables <i>Hands-on:</i> Exploring different mapping methods	Monmonier (1993) Ch3
7	3/17	Communication goals & visual hierarchy <i>Hands-on:</i> Creating a Story Map	Monmonier (1993) Ch4 <a href="#">ArcGIS Book, Ch3</a>
8	3/24	Count data vs. intensity data; Data classification <i>Hands-on:</i> Mapping census data (1)	Monmonier (2018) Ch11
9	3/31	Mapping movement, change, and process <i>Hands-on:</i> Mapping census data (2)	See Blackboard
10	4/7	Patterns, trends, and spatial models <i>Hands-on:</i> Making a bivariate relationship map	See Blackboard
11	4/14	Deep mapping and its applications <i>Hands-on:</i> Creating a predominance map	See Blackboard
12	4/21	Deep mapping and Digital Humanities <i>Hands-on:</i> TBD	See Blackboard
<b>Final Project Proposal (Due 11:59 p.m. April 27<sup>th</sup>)</b>			
13	4/28	Student project week	
14	5/5	Student project week	
<b>Final Story Map (Deadline: 11:59 p.m. May 16<sup>th</sup>, Sunday)</b>			

## CLASS POLICIES

**Blackboard:** You can access class information, documents, and assignments online at: <https://blackboard.stonybrook.edu> If you have never used Stony Brook's Blackboard system: for help or more information see the login page.

**Electronic Communication:** It is your responsibility to make sure that you read your email in your official University email account. For most students that is Google Apps for Education (<http://www.stonybrook.edu/mycloud>), but you may verify your official Electronic Post Office (EPO) address at <http://it.stonybrook.edu/help/kb/checking-or-changing-your-mail-forwarding-address-in-the-epo>.

If you choose to forward your official University email to another off-campus account, faculty are not responsible for any undeliverable messages to your alternative personal accounts. You can set up Google Mail forwarding using these DoIT-provided instructions found at <http://it.stonybrook.edu/help/kb/setting-up-mail-forwarding-in-google-mail>.

**If you need technical assistance, contact Client Support at (631) 632-9800 or use [the ITSM Service Portal](#).**

**Instructional/Student Responsibilities:** The University's statement of Minimal Instructional and Student Responsibilities was updated by the University Senate's Undergraduate Council in Fall 2008. Please review it carefully. Also listed are the Minimal Undergraduate Student Responsibilities. You may wish to copy these for your classes or direct students to the website. Both statements may be found in the Academic Policies and Regulations section of the on-line Undergraduate Bulletin [http://sb.cc.stonybrook.edu/bulletin/current/policiesandregulations/policies\\_expectations/min\\_instruational\\_student\\_resp.php](http://sb.cc.stonybrook.edu/bulletin/current/policiesandregulations/policies_expectations/min_instruational_student_resp.php)

**Student Accessibility Support Center Statement:** If you have a physical, psychological, medical, or learning disability that may impact your course work, please contact the Student Accessibility Support Center, Stony Brook Union Suite 107, (631) 632-6748, or at [sasc@stonybrook.edu](mailto:sasc@stonybrook.edu). They will determine with you what accommodations are necessary and appropriate. All information and documentation is confidential.

**Academic Integrity Statement:** Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at [http://www.stonybrook.edu/commcms/academic\\_integrity/index.html](http://www.stonybrook.edu/commcms/academic_integrity/index.html)

**Critical Incident Management:** Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of Student Conduct and Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

**Course Content:** Course material accessed from Blackboard, SB Connect, SB Capture or a Stony Brook Course website is for the exclusive use of students who are currently enrolled in the course. Content from these systems cannot be reused or distributed without written permission of the instructor and/or the copyright holder.