

Geography 380-01
Introduction to Digital Cartography
Fall 2018

Course Introduction and Outline

Hyowon Ban
Associate Professor, Geography, CSULB

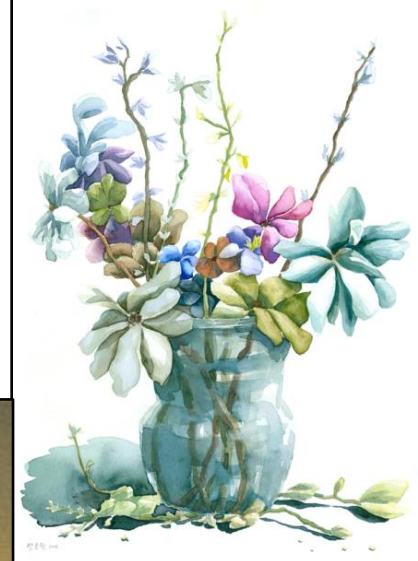
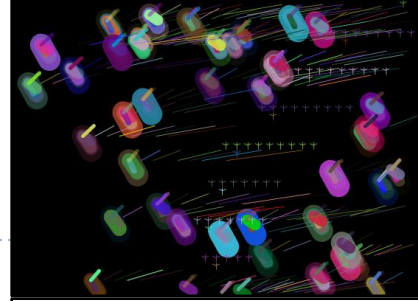
Who is the instructor?

- ▶ Born in 1976, South Korea
- ▶ BA Social Studies (Geography) 1999, Ewha Womans University
- ▶ MA Geography 2001, Ewha Womans University
- ▶ PhD Geography 2009. Ohio State University
 - ▶ Research/Teaching assistant 2004-2009
- ▶ Faculty (Geography, CSULB) 2009-
 - ▶ Digital cartography & Geovisualization
 - ▶ Geographic Information Science
 - ▶ Uncertainty of spatial concepts
 - ▶ GIScience and art
- ▶ ***Language distance between English and Korean...***



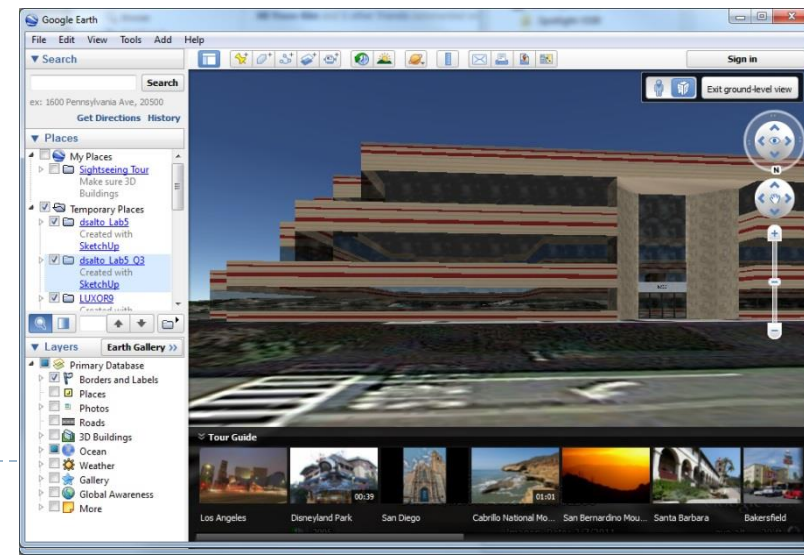
More clues...

- ▶ Past experiences
 - ▶ Ewha Womans University 1995-2001
 - ▶ ESRI Korea, Inc. 2001-2004
 - ▶ ArcGIS/ArcIMS courses, Instructor
 - ▶ Web-service GIS, Product manager
 - ▶ Technical support engineer
 - ▶ Mobile GIS
 - ▶ Ohio State University 2004-2009
 - ▶ GIScience and geovisualization
 - Uncertainty of exurban concept
 - Synchronous Objects project



Current activities at CSULB, Geography

- ▶ GEOG280 – Introduction to Geospatial Techniques
- ▶ GEOG380 – Introduction to Digital Mapping
- ▶ GEOG482 - Map Design Presentation & GIS
- ▶ GEOG497/697/698 - Directed Studies and Thesis
- ▶ GISC603 – Cartographic Visualization
- ▶ Research
 - ▶ Geovisualization and analysis of spatio-temporal information (ex. dance)
 - ▶ Spatial information and music
 - ▶ Interactive/web-based visualization
 - ▶ Uncertainty of undersea features



Now, why are you here...?

- ▶ Attendance check
- ▶ Brief introduction about yourself
 - ▶ Your name and major
 - ▶ Any reasons why you want to take this course
 - ▶ Do you have anything to learn from this course?



So, why study map interpretation & analysis?

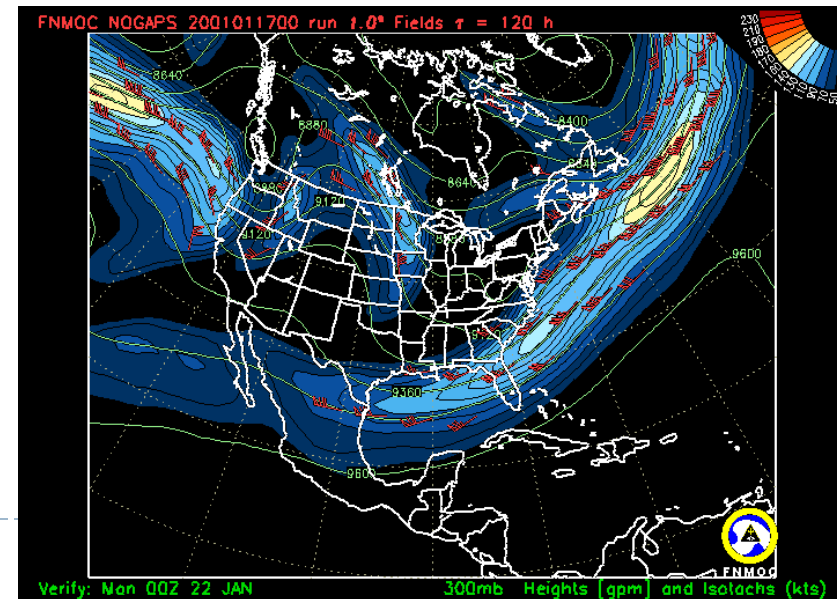
- ▶ Well...
 - ▶ Maps are one primary means to communicate geographic findings
 - ▶ Geographers like to think that spatial location is extremely important
 - ▶ ...and maybe it is?
 - ▶ Something that is *not* spatial or *aspatial*



Usefulness of maps

For example:

- ▶ Maps of climate, weather, population, land cover
 - ▶ show differences and similarities between places
 - ▶ set the context for studying geography (location!)
- ▶ We can also use maps to look at **trends over time**, e.g. climate, land cover, pollution, migration
- ▶ Maps can even be used as a basis for **modeling geographic phenomena**, such as urban sprawl, climate change, biodiversity
- ▶ Recent technologies
 - ▶ Media, the internet, and organization of knowledge...



Newspaper and TV map examples

Weather: LONG BEACH, CA | Now: 76°F | High: 92°F | Low: 68°F | 5-Day Forecast

Live Traffic: 405N 405S 605N 605S 710N 710S 91E 91W

Press-Telegram

LONG BEACH, CA

Search [Login](#) [Newsletter](#) [E-Edition](#) [Mobile](#) [Mobile Edition](#) [RSS](#) [Home Delivery](#)

☒ This Site ☐ Web Search powered by YAHOO!

Part of the LA.com Network

[Home](#) [News](#) [Sports](#) [Business](#) [Opinions](#) [LA.COM](#) [Lifestyle](#) [Contact Us/FAQ](#) [Classifieds](#) [Jobs](#) [Autos](#) [Homes](#) [Obituaries](#) [Business Directory](#)

[Ask About this Story](#)

Have a question about something in this story? Ask it here and get answers from readers like you.

Fire station map

Posted: 08/20/2009 05:33:21 PM PDT

LISTEN TO STORY [DOWNLOAD](#)

[More Podcasts](#)

Presented By: [Online Six Sigma Training](#)
Ears On Six Sigma March...

Recent Blog Posts
Updated at 9:49 AM

- [Servite looms \(The Shadow\)](#)
- [That's not a hickey ... \(The Shadow\)](#)
- [Jerrany King is the LBSU walk-on \(Burlison's World\)](#)
- [Six race to benefit children today \(The Canalis Report\)](#)
- [Dark skies in L.B. this morning \(The Canalis Report\)](#)

Most Views **Most Comments**

1. Norwalk man one of three alleged sex tourists
2. Long Beach budget meeting a taste of tough decisions to come
3. Son of retired pastor shot dead dropping family members off

Map data ©2009 Tele Atlas

Served by ZeeMaps

Ads by pulse360



Acai Berry EXPOSED (Official Test)

Want To Use Acai Berry? Do Not Use. Read This Warning Now.

[Explore now...](#)



Long Beach Moms! Lose 47lbs, Follow 1 Rule!

I Cut Down 47 lbs of Stomach Fat In A Month By Obeying This 1 Old Rule

[Explore now...](#)



Long Beach Residents: Make \$63Hr Part-Time!

\$63/hr part-time jobs open. Requirements: Just a computer.

[Explore now...](#)



<http://www.youtube.com/watch?v=vURsZzGA-Ck>

Driving directions

Google maps interface showing driving directions from Long Beach, CA to a destination in Japan. The map displays the Pacific Ocean and surrounding landmasses. A blue line indicates the route across the ocean, with a marker '32' placed on it. The directions list on the left includes steps 23 through 44, with step 32, 'Kayak across the Pacific Ocean', highlighted by a red circle.

Get Directions [My Maps](#)

23. Merge onto I-H-2 S 7.9 mi

24. Merge onto I-H-1 E 4.7 mi

25. Take exit 13B toward Halawa Hts. Stadium 0.3 mi

26. Merge onto I-H-201 E 4.1 mi

27. Merge onto I-H-1 E 4.1 mi

28. Take exit 23 for Punahou St toward Waikiki/Manoa 0.2 mi

29. Turn right at Punahou St 0.1 mi

30. Take the 1st right onto S Beretania St 0.1 mi

31. Take the 1st left onto Kalakaua Ave 1.9 mi

32. Kayak across the Pacific Ocean 3,879 mi

33. Turn left toward 県道275号線 0.4 mi

34. Turn left toward 県道275号線 358 ft

35. Turn left toward 県道275号線 0.2 mi

36. Turn right at 県道275号線 0.1 mi

37. Turn left at 国道125号線 499 ft

38. Turn right at 県道24号線 0.6 mi

39. Turn left at 千束町 (交差点) onto 国道354号線 2.0 mi

40. Turn right at 中村陸橋下 (交差点) to stay on 国道354号線 1.0 mi

41. Take the ramp to 常磐自動車道 Toll road 0.3 mi

42. Keep left at the fork, follow signs for 東京 and merge onto 常磐自動車道 Toll road 23.8 mi

43. Take exit 三郷 J C T toward 首都高・銀座・湾岸線 Toll road 0.7 mi

44. Merge onto 首都高速6号三郷線 Toll road 5.8 mi

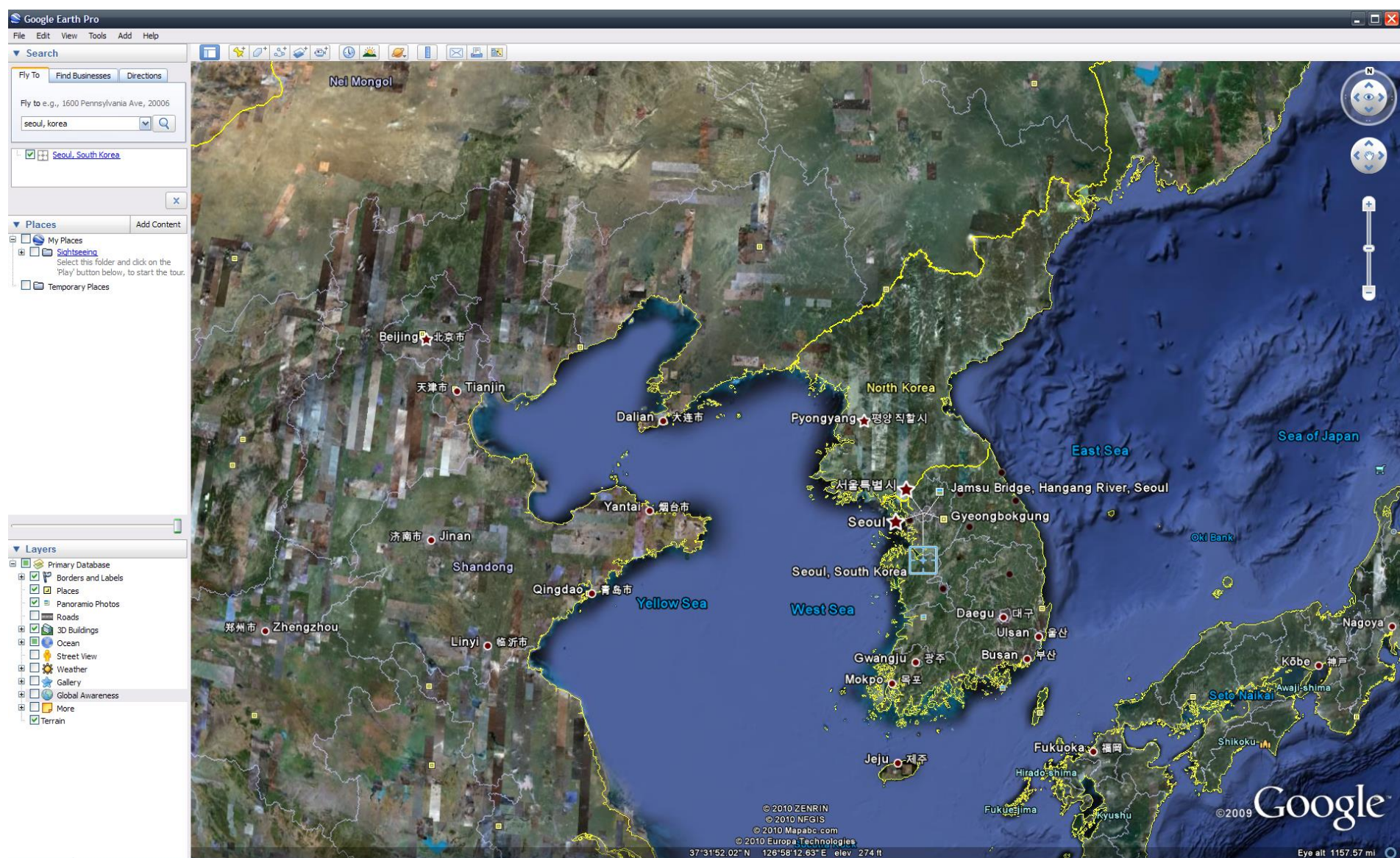
Long Beach, CA

2000 mi

© 2010 Map Data © 2010 AND, Geocentre Consulting, MapData Sciences Pty Ltd, PSMA, Tele Atlas, MapLink - Terms of Use

(found by 하우디)

Google Earth “world knowledge browser”



A number of issues

- ▶ Data availability for mapping
- ▶ Data analysis methods for mapping
- ▶ The round earth vs. a flat map
- ▶ Scale
- ▶ Generalization
- ▶ Design – color, symbols, type, typography
- ▶ Etc

...will be treated in the course in an introductory level, and
if you're interested in looking further into computer cartography and
visualization topics further, consider taking *GEOG482 (Map Design
Presentation & GIS, in Spring)* and *GISC603 (Advanced Concepts in
Presentation Cartography, in Spring)*



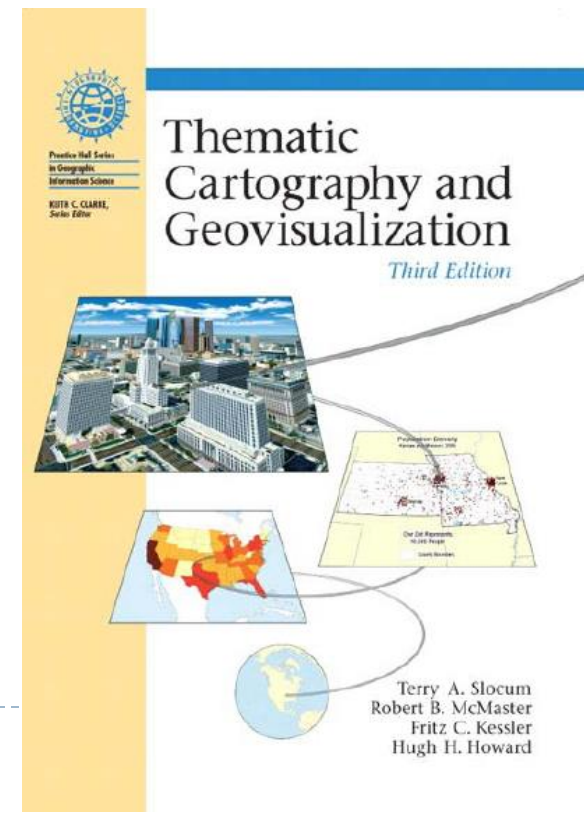
GEOG 380 - Course outline

► Objective

- To learn basic principles of cartographic communication

► Textbook

- Slocum T. et al. (2009), Thematic cartography and geovisualization, 3rd ed., Pearson Prentice Hall.
- (Reserved in the library)

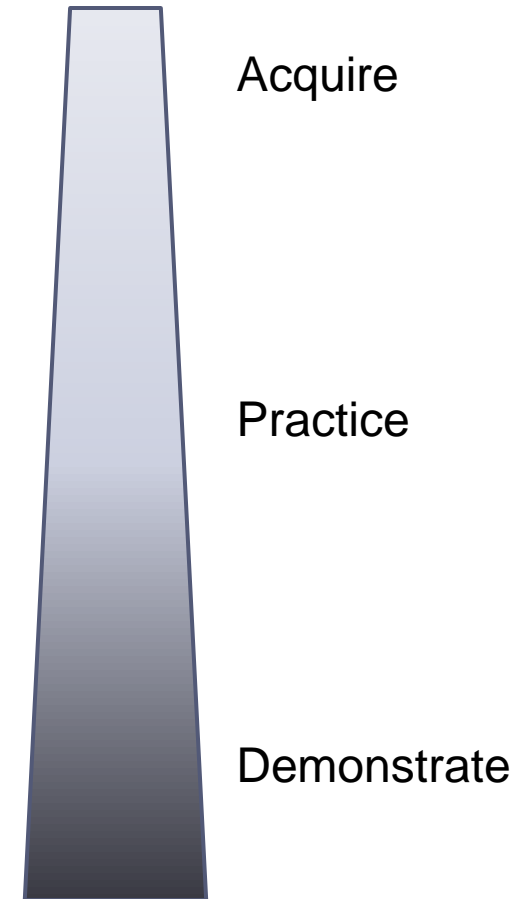
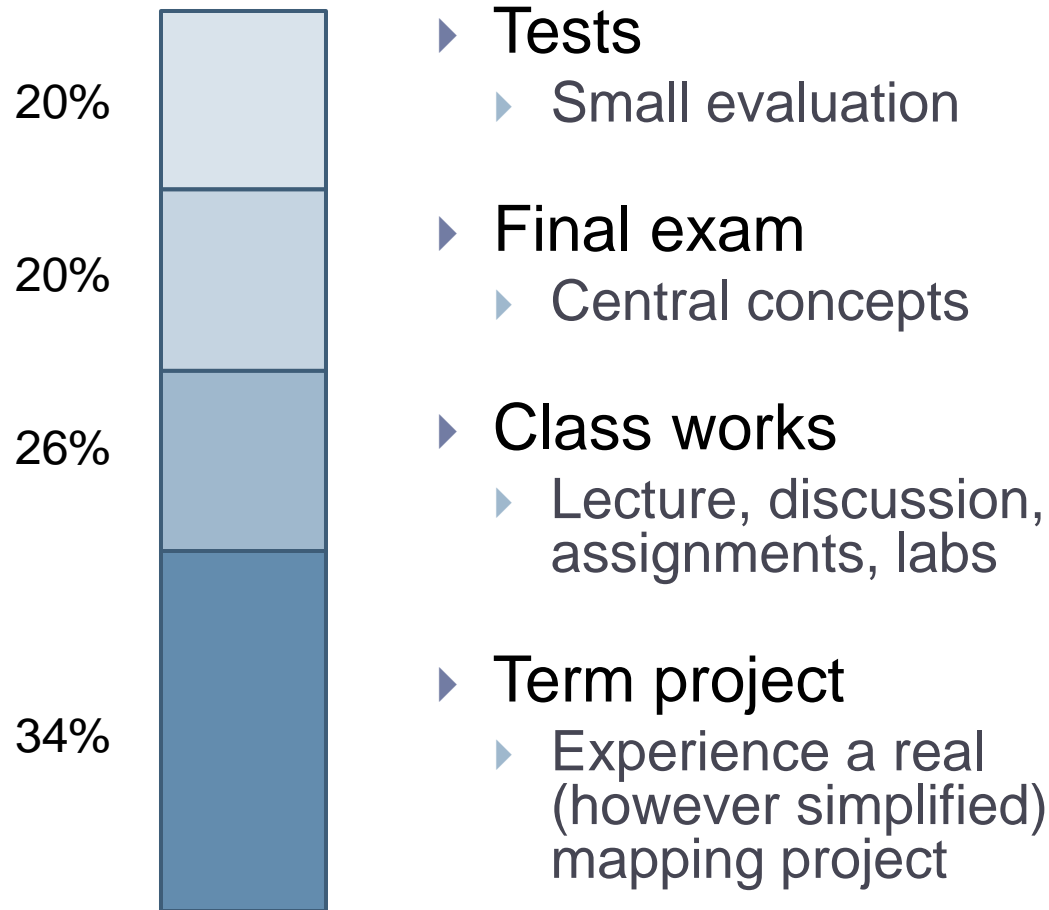


GEOG 380 - Course objectives

- ▶ How to read/interpret maps
 - ▶ Be able to **read and understand** different types of maps
 - ▶ Critically **evaluate** maps and be able to articulate why it is good or bad
- ▶ How to create good maps
 - ▶ Know about **elements** of cartographic communication
 - ▶ How and when to use different **types of maps**
 - ▶ Understand some types of **data analysis** useful for mapping
 - ▶ Make decisions about **map design** in a given situation



How to reach these objectives



Expectations

- ▶ **According to the Faculty Handbook...**
 - ▶ For each class hour students are required/expected to put in 2 hours of work outside class
 - ▶ About 6 hours per week required outside of class time for this course (e.g., for assignments, reading, study, etc.)
 - ▶ Naturally students differ in their learning curves for different types of material

GEOG 380 – Info of the course

- ▶ Schedule - Most current version on the **BeachBoard**
- ▶ Classes
 - ▶ Attendance for your own good & **Late > Absent**
- ▶ Examination policy - Better late than never!
- ▶ Cheating and plagiarism
 - ▶ **Don't cheat, don't copy&paste, don't share unless group work**
 - ▶ **Better turn in late than nothing**
- ▶ Disability services
 - ▶ Contact me and Disabled Student Services Office

RESOURCES

About Us

BeachBoard

Parking & Maps

Faculty Experts

MyCSULB

49er Shops

Campus
Directory

Schedule of
Classes

Library

Email

Help

Careers

GEOG 380 – Class website

- ▶ News & updates
- ▶ Syllabus & Schedules
- ▶ Lecture notes, labs, worksheets, study guides
- ▶ Class resources
- ▶ Discussion Boards



Map presentation

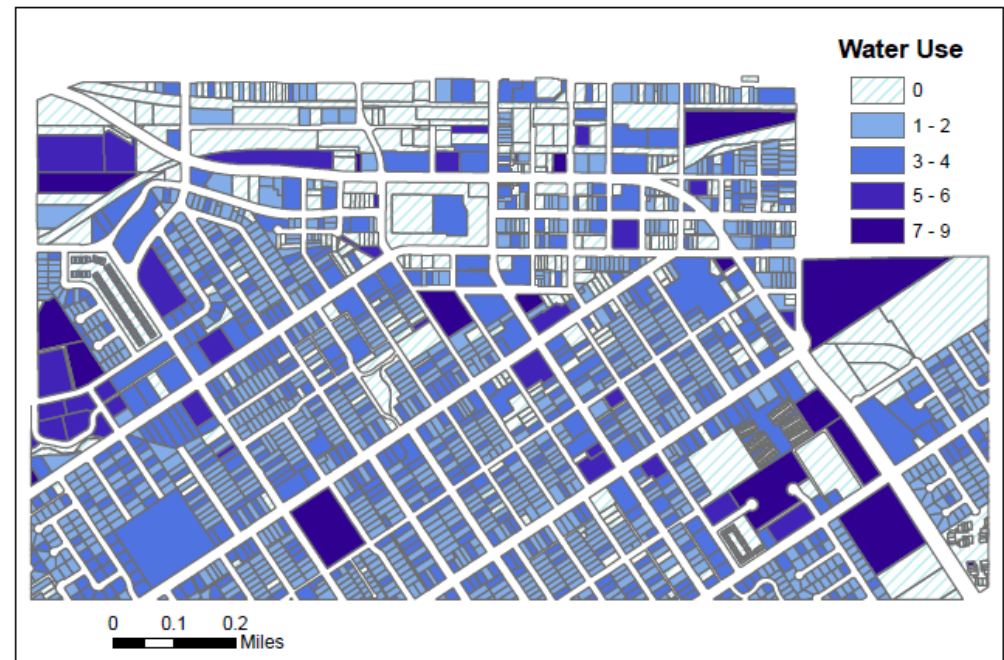
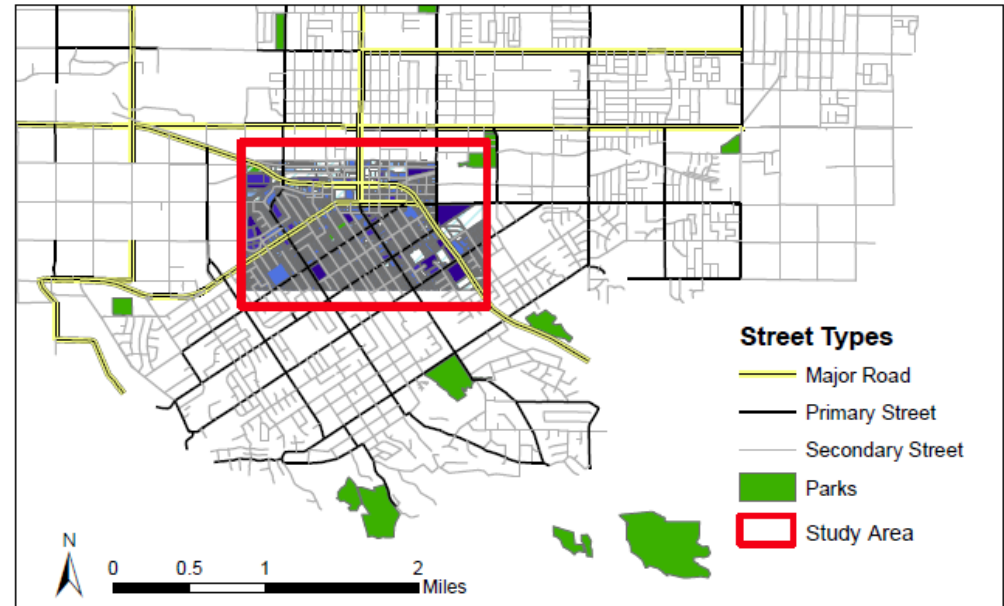
- ▶ What is it?
 - ▶ Pick one of any interesting [online maps](#) and copy the URL (link).
 - ▶ [Post your desired date of presentation and the URL](#) of the map to the BeachBoard: Discussions > "Map Presentation" forum > "My desired map presentation date & the URL" topic by clicking the topic. Click on the "[Start a New Thread](#)" button and the "[Post](#)" button on the board. *Refer the "example" thread posted under the topic.*
 - ▶ Pick one of the class meetings that have a "[map presentation:](#)" session. [See the schedules](#) to find eligible days. Let's limit up to 3-people/day. So, *first come first reserve*.
- ▶ During your map presentation,
 - ▶ Give a brief introduction about the map you chose (e.g. theme or topic)
 - ▶ Please use the projector in classroom to show the article to your colleagues
 - ▶ Tell us what you think about the map (e.g. data, design, colors, techniques used, strengths, weaknesses)
- ▶ One-time assignment/person through the course (individual task)
 - ▶ About 3~4 minutes for each person
- ▶ Counted as the In-class work
 - ▶ [20 points](#) out of 1000 points course-total

▶ [Any questions?](#)

Example Term Project works from SP/10

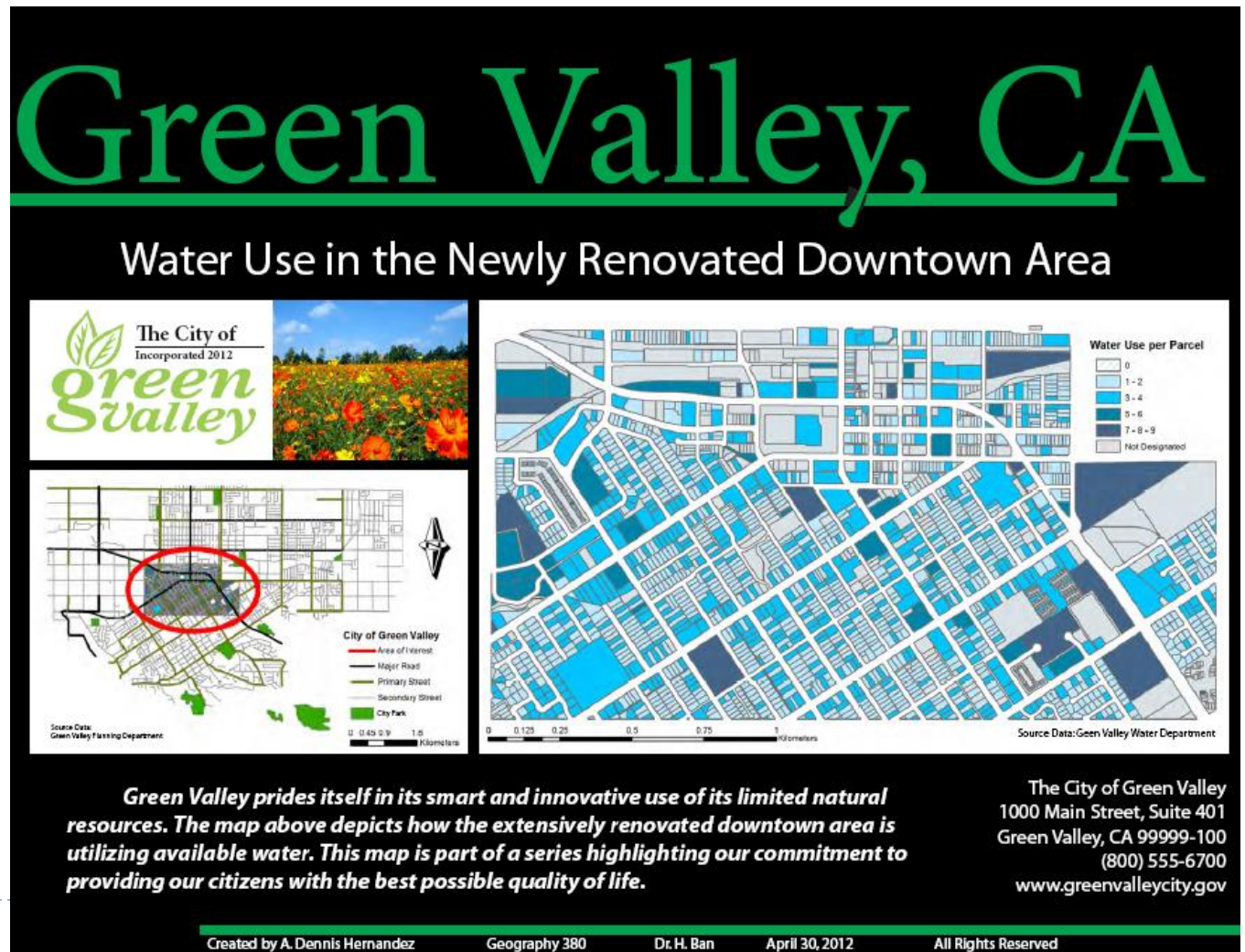
► Work of Jade Dean

Water Consumption in Green Valley, CA



Example Term Project works from SP/12

► Work of Arthur Hernandez



Example Term Project works from SP/16

Work of Jonathan Van

Every Drop Counts!

Water Consumption Green Valley, CA



Things to know to get started

- ▶ How to deal with ZIP files including GIS data
 - ▶ BeachBoard > Class Resources



To do...

- ▶ Make sure you can log-in on BeachBoard and...
 - ▶ [Access course materials](#) and review the syllabus & schedules
 - ▶ Confirm [your email address](#) at ***my.csulb.edu***
 - ▶ Get a copy of [textbook](#)
 - ▶ Readings
 - ▶ Slocum et al. (2009). Chapters 1&2
 - ▶ Try to install ArcGIS Desktop to your home PC once available
 - ▶ Student copy installation EVA codes will be distributed for Windows O/S
 - ▶ [Bring your USB drive](#) for every class meeting ([will use it in the next class](#))
 - ▶ Try to post your picture ([1 bonus point!](#).....out of 1,000) though not mandatory
 - ▶ Post your desired date and link for [map presentation \(20 points!\)](#)

 - ▶ **Any questions?**
-

