

Philosophy on Testing

My philosophy on testing is as follows. I do not attempt to be mischievous in creating an exam – and I have provided a general outline of what topics I think are important. You are responsible for the materials we covered in class, in lab **AND** in the assigned readings. I operate under the time-honored expectation that students should spend 2 hours outside of class/lab for every hour in class/lab. This means that I assume that people are taking the time to read what has been assigned as in many cases the lecture materials closely follow the book and the book provides much more detail than I have time to cover in class. I try to give a guide as to what I consider important, but assume you are learning more indepth material from the book.

Chapters to study

Chapter 1 - Introduction

Chapter 13 - Map Design

Chapters 2 & 3 Map Projections [ALSO READ THE MATERIALS ON THE LINKED WEBSITES]

Chapter 5 - Statistical Data (Not covered in class, but you are still responsible)

Chapter 18 - Graphing (Not very important)

Chapter 4 – The Nature of Geographic Phenomena and the Selection of Thematic Map symbols

Chapter 15 - Color

I will also hold you responsible for the class handouts

Chapter 1

- What is a map?
- What is cartography?
- What is geographic cartography?
- What are the general types of maps?
- What is a *Thematic* Map?
- Describe the cartographic process
- What processes are involved in Cartographic Abstraction and Generalization?

Chapter 13

- Describe the map design process
- What are some characteristics of Map aesthetics?
- What are the design elements of thematic maps? [pretty important stuff]
- What is the purpose of map composition?
- What are the three aspects of visual organization?
- What controls and object's weight in a thematic map [pretty important stuff]
- Where is the focus of attention in a map, and how does a reader proceed visually through a map? [pretty important stuff]
- Understand the visual hierarchy?

- What is the foreground, what is the background?
- What is closure and how can it be used in cartography?
- What are the perpetual grouping principals? [important]
- What is interposition, how is it used, and what are some of the problems with using interposition? [important]
- What methods have cartographers used to differentiate land and water?

Chapter 2 & 3

- What is an ellipsoid, what is a geoid and how do they differ?
- What is the difference between *earth* and *plane* coordinate geometry?
- What is a great circle, what is a small circle, what is a loxodrome.
- Describe the map projection process.
- Understand the various types of map scales
- What are the four properties of a globe? [very important]
- Understand the four types of mapping and how they relate to the four properties of a globe [very important]
- Understand the Tissot indicatrix and how it is used [important]
- What are the 3 map projection families and how are they created? [extremely important]
- What is the difference between a secant and tangent projection
- Have a general understanding of what type of projection you would employ in different situations [important, but I will not ask for specific projections - I look that up when needed, but in what situation do you employ a cylindrical type map for example]
- Understand map compilation [I did not go over this in class, but it is in chapter 3]

Chapter 4 - Map Symbolization

- What Key Geographic Concepts must Cartographers be aware of?
- What Spatial Dimensions must Geographers be aware of?
- What types of Geographical Phenomena are there?
- Be able to describe the types of measurement scales geographers use
- What types of Areal units do cartographers deal with
- What are the two types of Thematic Maps
- Understand, texture, value and saturation and how to symbolize the different types of measurements geographers use. **[We did not have time to cover this in class, but I will hold you responsible for it as it only covers a few pages]**

Chapter 5 – Processing Geographic Data

- Be able to differentiate between a variable, value and array
- Know what the mean, median, and mode are
- Understand what a histogram is
- Understand Quartiles and how they can be used in mapping
- Understand Linear Regression
- Understand why we use statistics and classification in cartography

[This was not covered in class, but you had a lab covering the topic....]

Chapter 15 - Color

- Have a basic understanding of how humans perceive color
- To what wavelengths are the human eye sensitive and why does something appear red, green or blue?
- Know the difference between chromatic and achromatic
- Understand HUE, CHROMA, and Value
- Understand Simultaneous and Successive Contrast and Color Constancy
- Understand both the RGB and CMYK color schemes and what is meant by complementary colors (e.g. what is the complement of blue)
- Have an understanding of what colors (and color combinations) are pleasant and which are not
- What is meant by advancing and retreating colors and how to these affect foreground/background relationships
- Understand how color combinations affect type legibility
- Know what types of color schemes are best for qualitative and quantitative maps

Chapter 18

- Not important for the test, but **REMEMBER** all the things you learn about making maps can be applied equally to graphs and you will use graphs more often than you will probably use maps

Some additional things to know

- We spent some time on the history of cartography. I would hope you would know the following people, when they lived, what they are famous for, etc
- Eratosthenes
- Ptolemy
- John Harrison
- Mercator (maybe a bit about his projection too)