



## INSTRUCTOR

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Pinkerton 213

Office Hours: by appointment

## *Cartography and Data Visualization*

### COURSE DESCRIPTION

This course brings together many of the skills and techniques learned throughout the Master's program in Geospatial Technologies to bear on designing 'better' maps. The rapid explosion in publicly available spatial information and a glut of new tools for the visualization of said data have resulted in a massive upswing in public interest in maps. Interactive and informative maps have become a staple of how individuals come to understand the world around them. However, at the same time, any data visualization remains inherently partial.

In this class, students learn advanced concepts in and theories of cartographic design and apply them to real world mapping and data visualization situations. As such, the class takes the form of both a seminar and a lab class. Students will work independently to both discuss cutting-edge theories of map design while also applying these new concepts and tools to enhance the work they have been doing in map production and data visualization throughout the Master's program and prepares students for their final capstone projects.

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### LEARNING OBJECTIVES

Students who complete this course will:

- Gain an ability to ask critically informed questions about visualization and representation of data and information [1]
- Be able to conceptualize and execute data visualizations using GISystems [2]
- Design original visualizations [3]
- Have a strong historical and contemporary understanding of the ways in which cartography and data visualization have and continue to influence the world [4]

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### READINGS

The course requires the following books:

- o Edney, *Cartography*
- o Schulten, *A History of American in 100 Maps*
- o W.E.B. DuBois Center, *W.E.B. DuBois's Data Portraits*

And the following books are highly recommended:

- o Field, *Cartography*

The course will additionally require extensive reading of articles distributed on canvas

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## ASSIGNMENTS

Labs (80% of course grade)

- o Each assignment is 5% 'check in' and 15% final production

Reading Responses (20% of course grade)

- o Two responses for 5% each
- o Two responses to other responses for 5% each

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## COURSE STRUCTURE

The course follows a cyclical nature. First, we read an important work in thinking about and through maps. Students post responses to readings (250 words minimum each). In Zoom, we discuss these readings and responses informally for an hour. Then, the remainder of that class is devoted to asking questions and receiving feedback on lab assignments. The next class, we discuss posted responses to the discussion and responses of last week (250 words minimum each) for half an hour. The remainder of that class is devoted to completing the lab assignment. The readings focus on theoretical and methodological approaches to map design, the role of mapping in the world, and the politics and knowledge production that underlie map design and creation.

During the working sessions, students work to undertake a series of labs. These labs follow along with the basic and advanced techniques of cartography and build upon the material discussed, their training throughout the MGST program, and empirical problems of mapping and data visualization. During this period, the students will produce four mapping 'products' (each worth 20% of their course grade). After the first working/discussion session, students will be expected to produce a 'check in' for 5% of the mapping project's grade.

**Weekly Responses:** Two times over the course of the quarter students will choose to submit a brief (single page) response to the assigned readings. These are due *and distributed to the class via Canvas* the day before the class. Therefore, if a student is submitting one of their responses for a class on Tuesday, the response will be due Monday at 9:00 p.m. The instructor will distribute responses to the class the following morning. Students are expected to come to class having read the summaries as well as the assigned reading as together they will form the basis of discussion. (10% of grade)

**Responding to Responses:** Two times over the course of the quarter, students will choose to submit a brief (single page) response to the assigned readings. These are due *and distributed to the class via Canvas* the day before the class. Therefore, if a student is submitting one of their responses for a class on Tuesday, the response will be due Monday at 9:00 p.m. The instructor will distribute responses to the class the following morning. These responses are reflections on the responses from the previous week as well as the discussion of the readings.

**Zoom meetings** will occur synchronously from 6-8pm on Thursday evenings. These sessions will be recorded and students are not required to attend; however, it will serve as an opportunity to ask questions and receive feedback and so students are encouraged to if able.

## **COURSE SCHEDULE**

**APRIL 2<sup>ND</sup> – Course discussion - How do we do this?**

**Readings:** None

**APRIL 9<sup>TH</sup> – What is a map?**

**Readings:** Edney, *Cartography* (Chapters 1-3 - up to page 103)

**Visualization:** Laying out a map in various media

**APRIL 16<sup>TH</sup> - What is a map? (and working session)**

**Visualization:** Laying out a map in various media (check in due)

**Readings:** Edney, *Cartography* (rest of book)

**APRIL 23<sup>RD</sup> – Data Portraits?**

**Readings:** *W.E.B. DuBois's Data Portraits*

**Visualization:** Color and Text

**April 30<sup>th</sup> – Color and Text (working session)**

**Visualization:** Color and Text (check in due)

**Suggested Readings:**

*Field, Cartography (selections)*

**MAY 7<sup>TH</sup> – Feminist Data**

**Readings:** ***SEE CANVAS***

**Visualization:** A feminist (!?) base map

**MAY 14<sup>TH</sup> – A feminist (!?) base map (working session)**

**Visualization:** A feminist (!?) base map (check in due)

**Suggested Readings:**

*Field, Cartography (selections)*

**MAY 21<sup>st</sup> – Well, ain't that America (no really, is it?)**

**Readings:** Schulten, *100 Maps*

**Visualization:** Thematic Mapping in the US

**MAY 28<sup>TH</sup>** – Thematic Mapping in the US (working session)

**Visualization:** Thematic Mapping in the US (check in due)

**June 4<sup>th</sup>** – Map Critique (site to be determined)

**Each student will display their assignments to other students and we will engage in respectful and constructive map critique**

### **INCLUSIVITY IN THE CLASSROOM**

In this class, we will have the chance to indicate the name that we prefer to be called and, if we choose, to identify pronouns with which we would like to be addressed. This will be done confidentially through Canvas.

### **ACADEMIC STANDARDS**

Students at the University of Washington are expected to maintain the highest standards of conduct as required by state legislation. The integrity that will be required in your professional career should be practiced in your academic career. Academic misconduct is a serious offense that can have severe penalties including failing an assignment, failing the course, or dismissal from the university. Cheating includes turning in work that is not your own, using resources for exams or assignments when not permitted, or if you consult or collaborate with anyone on assignments that are meant to be completed individually.

You are guilty of plagiarism if you fail to cite the source of any idea that is not your own. Plagiarism can be avoided by using reference citations correctly. You are responsible for learning how and when to document and attribute resources used in preparing a written or oral presentation. If you have any questions, please ask me or consult the Writing Center.

### **E-MAIL POLICY**

UW policy requires you to use a UW e-mail account for communications with professors and to ensure that messages from the course website are received. For more information on setting up a UW NetID and email account, see:  
<http://www.washington.edu/computing/uwnetid>

### **DISABILITIES**

Disability Support Services (DSS) offers resources and coordinates reasonable accommodations for students with disabilities. Reasonable accommodations are established through any interactive process between you, your instructor(s) and DSS. If you have not yet established services through DSS, but have, or think you have a temporary or permanent disability that requires accommodations (this can include mental health, attention-related, learning, vision, hearing, physical or health impacts), you are welcome to contact DSS at 253-692-4522 V/ 253-692-4413 / [DSSUWT@UW.EDU](mailto:DSSUWT@UW.EDU).

### **TEACHING AND LEARNING CENTER (TLC)**

The Teaching and Learning Center (TLC) in SNO 260 offers free academic support for students at all levels. Writing support is available at our online writing center. For math, stats and quantitative needs, assistance is available on a drop-in basis.

### **LIBRARY**

The UWT Library has resources, services and facilities to support students at all levels of expertise. We guide students through the research process, helping them learn how to develop effective research strategies and find and evaluate appropriate resources. For assistance or to schedule an appointment, visit us at the Reference Desk in the Library, email [tacref@uw.edu](mailto:tacref@uw.edu) or phone 253-692-4442.

### **STUDENT HEALTH AND WELLNESS - SHAW**

Confidential health services and counselors are available to help students cope with illness, health maintenance, stresses and personal issues.

### **CAREERS**

Assistance is available in career planning and job hunting at Career Development & Education.

### **FINANCIAL AID**

Information on tuition, financial aid and scholarships can be found online. You must make satisfactory academic progress to receive most forms of financial aid.

### **CAMPUS SAFETY INFORMATION**

The university-wide UW Alert system sends text messages of campus closures and emergencies.

### **INCLEMENT WEATHER**

In the event of bad weather, class may be canceled. Check the campus website or call 383-4636 to determine if campus is closed. If campus is open but conditions are bad, please check your e-mail, the course Canvas site, or call my office phone (253-692-5635) to determine if class will be held.

**Religious Accommodations:** Washington state law requires that UW develop a policy for accommodation of student absences or significant hardship due to reasons of faith or conscience, or for organized religious activities. The UW's policy, including more information about how to request an accommodation, is available at [Religious Accommodations Policy](https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/) (<https://registrar.washington.edu/staffandfaculty/religious-accommodations-policy/>). Accommodations must be requested within the first two weeks of this course using the [Religious Accommodations Request form](https://registrar.washington.edu/students/religious-accommodations-request/) (<https://registrar.washington.edu/students/religious-accommodations-request/>)