GEOG 383-SO1D and 383L-SO1D: 
Introduction to Cartography 
South Dakota State University 
Spring 2020 Course Syllabus 
Online Course 
3 Semester Credits 

Instructor: Peggy Harper 
Email: Peggy.Harper@sdstate.edu   Office Hours: Tues. and Thurs. 1-5

Course Description 
Cartography is the art and science of graphically representing a geographical area on a flat surface such as a map or chart. This may involve the superimposition of political, cultural, or other non geographical divisions onto the representation of a geographical area. When defined well, maps, are powerful forms of communication. The practice of cartography requires a basic knowledge of graphic design, computer science, mathematics, statistics, psychology, and most importantly, geography. During this course, we will survey some of the ways that these skills are used in the design and cartoon of maps. In addition, the course material will also include cartographic theory. This course will provide instructions on creating professional maps that will effectively communicate geographic information.

Catalog Description 
History and principles of cartography. Emphasis on field mapping; map projections; and exercises in map making. Corequisites: GEOG 383-383L.

Goals - To develop:
• An understanding of fundamental cartographic concepts
• A familiarity with geographic data
• Skills in computer-assisted map design and construction
By satisfactorily completing the course you should be able to produce and design professional maps. These skills can also be used in advanced geography and GIS courses within your degree program.

Course Structure 
For each of the four modules you will be expected to:
• Complete assigned readings
• Complete timed quizzes based on the readings and other course materials
• Participate in weekly discussion forum
• Complete weekly lab exercises
Textbooks

Recommended Books:

Lab Assignments
The lab assignments provide the opportunity to implement cartographic principles that are introduced in the readings and discussions. Please name each lab assignment Ex#_Firstinitial_Yourlastname.pdf (For example, Assignment 1 would be Ex1_P_Harper.pdf). Each of the lab assignments is worth 25 points.

Exercise are due on Sunday by 11:30pm. Late assignments will receive a 5 point late penalty for each week the assignment is late. Late assignments will not be accepted after two weeks from the due date. If an extension is needed due to an emergency circumstance or other school approved absence, the instructor must be contacted in advance, not after the due date. Contact the instructor if you have any questions regarding this policy.

Quizzes and Exams
There will be 3 quizzes based on the assigned readings and other materials presented. Quizzes will include multiple choice, true/false, and shorts answers. You will have 60 minutes to finish a quiz once you start. Please take notes while you are completing the reading assignments. These notes will be useful during the timed quizzes and studying for the final exam. No credit will be given for short answers that are verbatim out of the textbook or other course materials. Each quiz is worth 50 points.

There is one exam, the final exam which is worth 100 points. The exam covers topics introduced in lab assignments, discussions, and assigned readings. You should expect to find multiple choice, short essay and problem solving questions on the exams based on the 3 quizzes.

Weekly Discussion Forums
You are required to participate in the weekly discussion forums. You are required to post one thing/idea that you learned from the readings for that week and respond to at least two of your classmates posts. The weekly discussion forum posts are worth 10 points each. Your original post is due on Wednesday to allow enough time for other students to respond to the post. The weekly discussion forums will close on Sunday at 11:30pm.
Final Projects
The final project is a mapping project of your own choosing, design, and construction. The project is worth 100 points and is an opportunity to create a map project of a subject that is of your own academic interest. Details for the project are within Module 4 of D2L.

Attendance Policy
There is no official attendance policy as this is an online course. To demonstrate “attendance” you are required to take part on the discussion board, read course material, interact with the instructor, complete assignments, you are expected to log into D2L several times a week.

Evaluation Rubric and Course Outline

Online Discussions Guidelines
Students are expected to participate in the online discussions in the following manner:

• Enter Discussions a minimum of 2 days a week, with the 1st post by Wednesday of the week.
• Complete the assigned reading before participating in discussions. Your participation points are derived from the depth of your responses. The discussion should be thoughtful, informative, and respectful. Use the appropriate Discussion Forum and include the “subject” you are addressing.
• Read other students’ posts, post an in-depth comment/reply, or ask/answer questions about the topic under study. Add any new information you may have found in your reading.
• Remember to cite your posts when using content from the readings.
• Return to the site later in the week and review questions/further discussion on the topic. Be sure to read and answer any comments/questions that students have about your previous posts.
• Points for participation in the discussions will be assigned according to the depth and number of postings following the grading rubric below.

General Rules for Online Discussion Netiquette
• Respect others' ideas, feelings, and experiences.
• Be courteous. It is important to be honest and express yourself freely, but be sure that you include praise as well as constructive criticism.
• When posting responses, back up your assertions with data and evidence. These are especially important if you disagree with a response or topic.
• Remember that online communication lacks non-verbal cues. Make every effort to be clear and concise in communication.
• Never use all capital letters. This is considered “SHOUTING!”
• Humor can be misinterpreted due to the lack of non-verbal clues. You may wish to use emotion-icons (such as smiley faces.)

Weekly Discussion Rubric

<table>
<thead>
<tr>
<th>Evaluation Criteria</th>
<th>Full Credit</th>
<th>Half Credit</th>
<th>No Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity of Participation</td>
<td>Posts the assignment and at least 2 replies to other students giving honest feedback.</td>
<td>Responds to assignment and 1 other student</td>
<td>Only posts assignment. <strong>Does not respond</strong> to discussion question.</td>
</tr>
<tr>
<td>Frequency of Participation</td>
<td>Discussion is posted at least 48 hours before due date. Returns to read replies and answer questions of students replying to his/her posts.</td>
<td>Discussion is posted on the discussion due date &amp;/or does not return to answer questions.</td>
<td>Responds to discussion after due date or not at all.</td>
</tr>
<tr>
<td>---------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Quality of Information</td>
<td>Discussion clearly relates to main topic and adds new concepts/new information about the subject. Uses references in at least one post each week to support comments. Asks pertinent questions, and makes in-depth comments about the subject when replies to other students.</td>
<td>Post clearly relates to the main topic but adds no new concepts to discussion &amp;/or uses no references to document comments. Makes simple comments about the subject when replies to other students.</td>
<td>Makes simple replies to other's students with no depth. Discussion has little or nothing to do with topic. No replies to other students.</td>
</tr>
<tr>
<td>Quality of Information</td>
<td>Discussion clearly relates to main topic and adds new concepts/new information about the subject. Uses references in at least one post each week to support comments. Asks pertinent questions, and makes in-depth comments about the subject when replies to other students.</td>
<td>Post clearly relates to the main topic but adds no new concepts to discussion &amp;/or uses no references to document comments. Makes simple comments about the subject when replies to other students.</td>
<td>Makes simple replies to other's students with no depth. Discussion has little or nothing to do with topic. No replies to other students.</td>
</tr>
<tr>
<td>Critical Thinking</td>
<td>Post clearly shows the student has studied the topic and has given thought to the topic under discussion. Discussion is accurate and logical.</td>
<td>Post shows student studied some of the topic under discussion. Discussion is accurate but lacks depth.</td>
<td>Post shows no evidence that the student has read or studied the topic. Discussion lacks depth. May be presented in a rambling manner. Post is inaccurate &amp;/or is unclear.</td>
</tr>
<tr>
<td>Netiquette</td>
<td>Uses proper on-line netiquette with all posts asking questions and giving feedback to other students.</td>
<td>Uses proper on-line netiquette with most posts.</td>
<td>Lack of response to students. Is at times sarcastic &amp;/or negative with responses. Inappropriate use of humor.</td>
</tr>
</tbody>
</table>
### Course Outline

**Module 1 - Getting Started and Introduction to Cartography**
Read *Thematic Cartography and Geovisualization* - Chapters 1, 3, 4 and 11 (section 11.2)
Lab Exercises 1, 2 and 3
Weekly Discussion Forums 1, 2, and 3
ArcGIS and ArcGIS Online Set-up

<table>
<thead>
<tr>
<th>Week 1 - Introduction</th>
<th>Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
<td>Points</td>
<td></td>
</tr>
<tr>
<td>Weekly Discussion Forum 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post and respond, get to know your classmates and Chapter 1 Readings</td>
<td>1/19</td>
<td>10</td>
</tr>
<tr>
<td>Lab Exercise 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connect to ArcGIS and ArcGIS Online</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Submit screen shot showing that you are connected</td>
<td>1/19</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 2 - Statistical and Graphical Foundation (Martin Luther King Holiday 1/20/2020)</th>
<th>Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Discussion Forum 2</td>
<td>1/26</td>
<td>10</td>
</tr>
<tr>
<td>Post and Respond regarding Chapter 3 Readings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lab Exercise 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting Started</td>
<td>1/26</td>
<td>25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Week 3 - Data Entry</th>
<th>Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weekly Discussion Forum 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post and respond Chapter 4 and 11 (section 11.2) Readings</td>
<td>2/2</td>
<td>10</td>
</tr>
<tr>
<td>Lab Exercise 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data Entry</td>
<td>2/2</td>
<td>25</td>
</tr>
</tbody>
</table>

To Submit via D2L:
- Screenshot and screenprint of your final attribute table (please make screenshot large enough to see individual records and fields)
- Your .dbf file
- Answers to the exercise questions

<table>
<thead>
<tr>
<th>Module 1 Quiz</th>
<th>Date</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2/2 50</td>
</tr>
</tbody>
</table>

**Module 2 - Principles of Cartography**
Read *Thematic Cartography and Geovisualization* - Chapters 5, 6, 7, 8, 10, 11, 12, Review 9
Lab Exercises 4, 5, 6, 7, and 8
Weekly Discussion Forums 4, 5, 6, 7, and 8

- **Week 4 - Principles of Cartography**
  - Weekly Discussion Forum 4
    - Post and Respond regarding Chapter 5 Readings 2/09 10
  - Lab Exercise 4
    - Complete ESRI Web Course *Map Design Fundamentals* 2/09 25

- **Week 5 - Projections**
  - Weekly Discussion Forum 5
    - Post and Respond regarding Chapter 6, 7, and 8 Readings 2/16 10
  - Lab Exercise 5
    - Projections 2/16 25

- **Week 6 - Map Elements and Typography**
  - Weekly Discussion Forum 6
    - Post and Respond regarding Chapter 11 Readings 2/23 10
  - Lab Exercise 6
    - Typography 2/23 25

- **Week 7 - Cartographic Design (President’s Day Holiday 2/17/2020)**
  - Weekly Discussion Forum 7
    - Post and Respond regarding Chapter 12 Readings 3/01 10
  - Lab Exercise 7
    - Cartographic Elements 3/01 25

- **Week 8 - Principles of Color**
  - Weekly Discussion Forum 8
    - Post and Respond regarding Chapter 10 Readings 3/08 10
  - Lab Exercise 8
    - Complete ESRI Tutorial *The Power of Maps* 3/08 25
    - You will need to submit a one page paper on what you learned in the tutorial, highlighting what has been discussed in class so far.

- **Module 2 Quiz** 3/08 50

**Module 3 - Mapping Techniques**
Read *Thematic Cartography and Geovisualization* - Chapters 14, 15, 16, 17, 18, and 19
Lab Exercises 10, 11, and 13
Weekly Discussion Forums 10, 11, 12, and 13

**Week 9**

- * Spring Break 3/9 - 13/2020 - No Assignments this week *

- **Week 10 - Choropleth Maps**
• Weekly Discussion Forum 10
  • Post and Respond regarding Chapter 14 Readings 3/22 10
• Lab Exercise 10
  • The Choropleth Maps 3/22 25

• Week 11 - Cartograms and Flow Maps
  • Weekly Discussion Forum 11
  • Post and Respond regarding Chapter 19 Readings 3/29 10
  • Lab Exercise 11
  • Cartograms and Flow Maps 3/29 25

** Note: Due to Easter Recess, Weekly Discussion 12 and 13, Lab Exercise 13 and Quiz 3 are all due Sunday, April 12. Please try to post in the two discussions early to allow your classmates time to respond.**

• Week 12 - Proportional Symbol and Dot Mapping (Easter Recess 4/10-12/2020)
  • Weekly Discussion Forum 12
  • Post and Respond regarding Chapter 17 Readings 4/12 10
  • No Lab Exercise This Week

• Week 13 - Multivariate Maps
  • Weekly Discussion Forum 13
  • Post and Respond regarding Chapters 15, 16, and 18 Readings 4/12 10
  • Lab Exercise 13
    • Lab Exercise 13 - Multivariate Maps 4/12 25

• Module 3 Quiz
  4/12 50

Module 4 - Geovisualization and Final Project
Read *Thematic Cartography and Geovisualization* - Chapters 20, 22, and 24
Lab Exercises 14, 15, and 16
Weekly Discussion Forums 14, 15, and 16

Final Project

• Week 14 - Web Mapping
  • Weekly Discussion Forum 14
  • Post and Respond regarding Chapter 24 Readings 4/19 10
  • Lab Exercise 14
    • Watch ESRI Video ArcGIS Online: Mapping Basics
    • Complete ESRI Tutorial "Get Started with Map Viewer"
    • Submit a 1-page review of Map Viewer and with pdf's of your work from the tutorial 4/19 25

• Week 15 - Data Exploration
• Weekly Discussion Forum 15  
  • Post and Respond regarding Chapter 22 Readings  4/26  10  
• Lab Exercise 15  
  • ESRI Tutorial, Mapping the Public Garden  4/26  25  
  • Write a 2-page review of the tutorial including how you can apply  
  • these techniques to your project

• Week 16 - Visualizing Terrain  
• Weekly Discussion Forum 16  
  • Post and Respond regarding Chapter 20 Readings and  
  • Progress of Final Project  5/01  10  
• Final Project Due  5/01  100  

Week 17  
Final Exam (4/29-5/3)  5/08  100

Total Course Points  -  805  

A = 775-675, B = 674-574, C = 573-473, D = 472-372, F = ≤ 371

All assessments are to be considered individual assessments. Any collaboration on any assignment will be considered academic dishonesty, without exception.

Attendance Policy  
Attendance is dependent on active participation in the completion of all group learning activities. Attendance is not based on total login time but active participation to complete goals of the learning activity.

Students are responsible for staying current with the discussions and class activities. Instructor’s determination of whether or not the student has met the requirement of “active participation” during group learning activities will be based on quality, timeliness, and the value of discussion postings.

Online Protocols (Netiquette)  
Online protocols, or netiquette, are a way of defining professionalism through network communications. The following core rules delineate what should and should not be done with regards to online communication in order to maintain common courtesy.

• Use correct grammar, sentence structure and punctuation.  
• Think about what you wrote and edit before posting your message.  
• Proof read what you write several times before posting.  
• Be clear and concise. Explain your thoughts and ideas thoroughly, but get to the point.  
• Use proper grammar, sentence structure, and punctuation.  
• Think about what you wrote and edit before you hit send or post.  
• Proof what you are going to send more than once.  
• Be clear and concise. Explain your thoughts and ideas thoroughly, but get to the point.  
• Use bullets, multiple paragraphs, so that your point is clear.
• Share tips and provide guidance to your classmates. Ask your classmates for feedback. Ask your classmates questions.
• Do not put your classmates down, always demonstrate courtesy and respect.
• Do not verbally attack your classmates because of their opinions.
• Do not harass, threaten, or embarrass your classmates or instructor.
• Do NOT use offensive language. Do not use slang. Be humorous, do not be sarcastic. Always use professional language.
• Be open minded. We are all here to learn from each other. Dissenting opinions, when presented respectfully, are welcome.
• Reference sources, the textbook, your classmates. Cite if necessary. Better yet, use your own understanding of the work, avoiding direct quotes, and then citing the author and source of the original idea.
• Try to respond to discussion posts within a 24-hour period.
• Be patient when waiting for a response, being respectful of your classmates’ schedules.
• Share your online schedule with others, as needed.

ADA Statement
Any student who feels s/he may need an accommodation based on the impact of a disability should contact Nancy Hartenoff Crooks, Coordinator of Disability Services (605) - 688-4504 or Fax, (605) – 688 – 4987, to privately discuss your specific needs.

The Office of Disability Services is located in room 065, the Student Union.

Diversity and Inclusion
In this class, people of all ethnicities, gender identities, religions, ages, sexual orientations, disabilities, socioeconomic backgrounds, regions, and nationalities are strongly encouraged to share their perspectives and experiences.

Over the course of the semester, please honor the uniqueness of your fellow classmates and refrain from personal attacks or demeaning comments of any kind. If you feel your differences may in some way isolate you from South Dakota State University’s community or if you have any specific accommodations, please speak with me about your concerns and what we can do together to help you become an active and engaged member of our class and community.

Freedom in Learning Statement
Students are responsible for learning the content of any course of study in which they are enrolled. Under Board of Regents and University policy, student academic performance shall be evaluated solely on an academic basis and students should be free to take reasoned exception to the data or views offered in any courses of study.

Students who believe that an academic evaluation is unrelated to academic standards but is related instead to judgment of their personal opinion or conduct should first contact the instructor of the course. If the student remains unsatisfied, the student may contact the department head and/or dean of college which offers the class to initiate a review of the evaluation.

Student Academic Integrity and Appeals
The University has a clear expectation for academic integrity and does not tolerate academic dishonesty. University Policy 2.4 sets forth the definitions of academic
dishonesty, which includes but is not limited to, cheating, plagiarism, fabrication, facilitating academic dishonesty, misrepresentation, and other forms of dishonesty relating to academics. The Policy and its Procedures also set forth how charges of academic dishonesty are handled at the University. Academic Dishonesty is strictly proscribed and if found may result in student discipline up to and including dismissal from the University.

Guidelines for Success
Taking an online class is an amazing experience. Success, though, is up to you, the student. The Instructor’s goal is for each and every one of you to get the most out of this course whether or not you go on to take another course in GIS. You should be able to put what you have learned to excellent use. Read the guidelines below. Refer to them often. If you do, you will achieve all of the stated learning outcomes, and more.

1) Read this Syllabus. Read it often. If you have any questions, please ask.
2) Ask questions.
3) Login to the course daily. Login in at whatever time works best for you. If you check in often and at various times you will always be up to speed on what is happening in the course.
4) At the beginning of each module, read the textbook chapters first.
   a. Refer to your textbook often.
   b. The textbook will provide an increased depth of learning and will allow you to fully participate in the discussion questions and assignments.
   c. It is not enough to know how to do something; you need to know why you are doing it.
5) Review the materials in the Content section in D2L for each module.
   a. Take your time, and view and absorb the material.
   b. Bookmark pages that you find especially relevant.
   c. Take notes on items that really speak to you and/or you want to learn more about.
6) Turn in assignments on time.
   a. Check the dropbox for items that are due.
   b. Check the calendar in this syllabus.
   c. After turning in your assignment via the dropbox, verify that it was turned in.
      i. You will receive a D2L e-mail verifying that your assignment was received.
      ii. Again, check the dropbox. It will show when your assignment was submitted.
7) The discussion forums are extremely important. You will be graded on your level and quality of participation.
8) Utilize critical thinking skills.
   a. Critical thinking is the ability to think clearly and rationally.
   b. The Critical Thinking Community
9) The experience of this course is what you make of it. Participate, communicate, collaborate, and discuss.
10) Go the extra mile.
    a. Take the lead in an online discussion.
    b. Introvert or extrovert? It does not matter online, no matter your personality you can shine and stand out.
    c. Encourage your classmates. Make helpful suggestions.
    d. Take an active role with informed comments
    e. Maintain a positive atmosphere.
    f. This course will reinforce respect and value others ideas.
    g. Encourage others so that they can achieve their goals, too.
11) Always be respectful and use proper grammar when communicating with the instructor and your classmates.
12) Think about the big picture. How will you use GIS today? Tomorrow? In the future?