Syllabus – Fall 2020

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

Course and Instructor Information

Course Title: GEOG 3510. Cartographic Techniques
Credits: 3 credits
Format: Online
Prerequisites: Geog 2500, 2505 and consent of instructor

Professor/Instructor/Facilitator: Dr. Weidong Li
Pronouns: he/him/his

Email: weidong.li@uconn.edu (preferred method of contact via email)
Telephone: 860-486-6977
Other: 860-938-6583 (cell)
Office Hours/Availability: M 11:00am—2:00pm time, or by appointment

Course Materials

Required course materials should be obtained before the first day of class.

Required textbooks are available for purchase through the UConn Bookstore (or use the Purchase Textbooks tool in HuskyCT). Textbooks can be shipped (fees apply).

Required Materials:

None. All required readings are provided in the course website.

Optional Materials:


Additional course readings and media are available within HuskyCT, through either an Internet link or Library Resources

Course Description
This course introduces the basic concepts and techniques that underlie map making and the broader field of geographic visualization. It covers design principles and techniques for creating maps with contemporary mapping tools. Topics include the fundamentals of making maps digitally, for example, map symbolization, scale, and generalization, and also the contribution to geographic visualization from the fields of scientific visualization, information visualization, and cognition. The course also offers an opportunity to learn about dynamic map design by constructing map animations. Laboratory exercises use GIS software are designed to familiarize students with visualization techniques in practical applications.

Course Objectives

The primary objective of this class is to learn how to make great maps. While this includes learning cartographic design theory, most important is the practical application of this knowledge. Successful completion of this course will signify mastery in map production for communication and research; students will be practiced in making, analyzing, critiquing, and sharing high-quality maps. By the end of the semester, students should be able to:

1. Understand fundamentals of modern digital cartography and geovisualization, i.e., the basics for representing knowledge on maps in geographic information systems;
2. Gain familiarity with map symbolization, color theory, and scale;
3. Understand the contribution to geographic visualization from the fields of cognition, scientific visualization, and information visualization;
4. Gain an introduction to dynamic mapping and mapping on the web;
5. Apply cartographic techniques using spatial data

Course Outline

Module 1: Basemaps and Big Picture Design
Learn the basics of map and map symbol design, and create some general-purpose maps in ArcGIS Pro.

Weeks 1 and 2. Due lab exercise 1 (end of week 2)

Module 2: Lettering and Layouts
Focus on place labels and marginal map elements (e.g., scale bars, north arrows, etc.). We'll discuss typography and the art of text-based elements: you'll learn how to classify and select appropriate fonts, and how to apply this knowledge when creating place labels for maps.

Weeks 3 and 4. Due lab exercise 2 (end of week 4)

Module 3: From Data to Design
Compare and contrast the four most common types of thematic maps (choropleth, isopleth, proportional symbol, and dot) and map two of these in Lab 3.

Weeks 5 and 6. Due lab exercise 3 (end of week 6)

Module 4: Color and Choropleth Maps
Focus on a specific type of thematic map: choropleth maps. Choropleth maps also typically employ color in their design, so in module 4 we'll discuss color in-depth.

Weeks 7 and 8. Due lab exercise 4 (end of week 8)

Module 5: Flow Mapping and Projections
Discuss the flow maps: maps that show movement between locations. Introduce another topic integral to cartography: map projection

Weeks 9 and 10. Due lab exercise 5 (end of week 10)

Module 6: Terrain Visualization and Web Mapping
In this lesson, we'll learn about many techniques that exist for modeling Earth's terrain. We'll use 3D symbology and develop a sense of when 3D adds value to the map. We'll also talk about what a web map is.

Weeks 11 and 12. Due lab exercise 6 (end of week 12)
Module 7: Final project – Designing and Creating a Map
Weeks 13 – 14. Project report due (end of week 14)

Calendar and/or Class Meeting Schedule
Please notes: the schedule on your syllabus as “tentative” or “subject to change”. I will email you if there will be schedule changes.

<table>
<thead>
<tr>
<th>Module Name</th>
<th>Date</th>
<th>Topics</th>
<th>Quizzes</th>
<th>Lab Exercises</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module 1</td>
<td>Weeks 1 and 2 (Aug.31- Sept.13)</td>
<td>Basemaps and Big Picture Design</td>
<td>Quiz 1 Due quiz 1 at the end of week 2</td>
<td>Lab exercise 1 Due lab exercise 1 at the end of week 2</td>
</tr>
<tr>
<td>Module 2</td>
<td>Weeks 3 and 4 (Sept. 14- Sept. 27)</td>
<td>Lettering and Layouts</td>
<td>Quiz 2 Due quiz 2 at the end of week 4</td>
<td>Lab exercise 2 Due lab exercise 2 at the end of week 4</td>
</tr>
<tr>
<td>Module 3</td>
<td>Weeks 5 and 6 (Sept. 28- Oct. 11)</td>
<td>From Data to Design</td>
<td>Quiz 3 Due quiz 3 at the end of week 6</td>
<td>Lab exercise 3 Due lab exercise 3 at the end of week 6</td>
</tr>
<tr>
<td>Module 4</td>
<td>Weeks 7 and 8 (Oct. 12- Oct. 25)</td>
<td>Color and Choropleth Maps</td>
<td>Quiz 4 Due quiz 4 at the end of week 8</td>
<td>Lab exercise 4 Due lab exercise 4 at the end of week 8</td>
</tr>
<tr>
<td>Module 5</td>
<td>Weeks 9 and 10 (Oct. 26- Nov. 8)</td>
<td>Flow Mapping and Projections</td>
<td>Quiz 5 Due quiz 5 at the end of week 10</td>
<td>Lab exercise 5 Due lab exercise 5 at the end of week 10</td>
</tr>
<tr>
<td>Module 6</td>
<td>Weeks 11 – 12 (Nov. 9- Nov. 22)</td>
<td>Terrain Visualization and Web Mapping</td>
<td>Quiz 6 Due quiz 6 at the end of week 12</td>
<td>Lab exercise 6 Due lab exercise 6 at the end of week 12</td>
</tr>
<tr>
<td>Module 7</td>
<td>Weeks 13 – 14 (Nov. 30- Dec. 13)</td>
<td>Final project (Designing and Creating a Map)</td>
<td>Project report due at the end of week 14</td>
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</table>

Course Requirements and Grading

Summary of Course Grading:

<table>
<thead>
<tr>
<th>Course Components</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>12%</td>
</tr>
<tr>
<td>Lab Exercises</td>
<td>80%</td>
</tr>
<tr>
<td>Course Project</td>
<td>8%</td>
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</tbody>
</table>

Quizzes (6 Quizzes -- total 120 points)
The quiz format is open book multiple choice questions. The quizzes cover the lectures, and assigned reading. A make-up quiz will be scheduled only in the event of personal illness or extraordinary circumstances. Anyone who will miss a quiz must notify the instructor in advance of the quiz date.

Lab Exercises (6 exercises—total 800 points)
Six Lab exercises are given. All assignments are due at the specific time assigned. The scores for late submitted assignments will be deducted by 5% per day except in extraordinary circumstances. The six exercises will help to
create the final course project.

Course Project (Total 80 points)
Students will plan and create a specific Map for any application on a topic based on their own interests. The project will offer an opportunity to refine and apply skills learned. The instructor will provide the example data and application at the start of class. The six exercise assignments will help students to develop the final project. Students can gather and integrate other data to create a Map. The project will contain a written report.

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Letter Grade</th>
<th>GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>93-100</td>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>90-92</td>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>83-86</td>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>80-82</td>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>73-76</td>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>70-72</td>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>67-69</td>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>63-66</td>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>60-62</td>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

Due Dates and Late Policy

All course due dates are identified in the course outline. Deadlines are based on Eastern Time; if you are in a different time zone, please adjust your submittal times accordingly. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.

The scores for late submitted assignments will be deducted by 5% per day except in extraordinary circumstances.

Feedback and Grades

I will make every effort to provide feedback and grades as soon as possible through individual meetings, course websites, emails, and phone. To keep track of your performance in the course, refer to My Grades in HuskyCT.

Weekly Time Commitment

You should expect to dedicate 6 to 9 hours a week to this course. This expectation is based on the various course activities, assignments, and assessments and the University of Connecticut’s policy regarding credit hours. (More information related to hours per week per credit can be accessed at the Online Student website).

Student Authentication and Verification

The University of Connecticut is required to verify the identity of students who participate in online courses and to establish that students who register in an online course are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

- Secure access to the learning management system using your unique UConn NetID and password.
- Video Conference with ID check

How to Succeed in this Course
All students can succeed in this course and we are here to help you along the way. Please do not hesitate to ask questions or attend office hours. All questions are important here. Success in this course depends heavily on your personal health and well-being. Recognize that stress is an expected part of the college experience, and it often can be compounded by unexpected setbacks or life changes outside the classroom. I strongly encourage you to reframe challenges as an unavoidable pathway to success. Reflect on your role in taking care of yourself throughout the semester, before the demands of exams and projects reach their peak. Please feel free to reach out to me about any difficulty you may be having that may impact your performance in your courses or campus life as soon as it occurs and before it becomes too overwhelming. In addition to your academic advisor, I strongly encourage you to contact the many other support services on campus that stand ready to assist you.

Please get helps from the support services on campus such as: Dean of Students Office, Academic Achievement Center, Writing Center, Quantitative Learning Center, Center for Students with Disabilities, Title IX Office, Student Health and Wellness -- Mental Health.

Husky Study Groups

Are you interested in forming a study group with other students in the class? There is a study group application in Nexus that can help you get started. Consider to watch this video and click here (https://nexus.uconn.edu/secure_per/studygroups/index.php) for more information.

Resources for Students Experiencing Distress

The University of Connecticut is committed to supporting students in their mental health, their psychological and social well-being, and their connection to their academic experience and overall wellness. The university believes that academic, personal, and professional development can flourish only when each member of our community is assured equitable access to mental health services. The university aims to make access to mental health attainable while fostering a community reflecting equity and diversity and understands that good mental health may lead to personal and professional growth, greater self-awareness, increased social engagement, enhanced academic success, and campus and community involvement.

Students who feel they may benefit from speaking with a mental health professional can find support and resources through the Student Health and Wellness-Mental Health (SHaW-MH) office. Through SHaW-MH, students can make an appointment with a mental health professional and engage in confidential conversations or seek recommendations or referrals for any mental health or psychological concern.

Mental health services are included as part of the university’s student health insurance plan and also partially funded through university fees. If you do not have UConn’s student health insurance plan, most major insurance plans are also accepted. Students can visit the Student Health and Wellness-Mental Health located in Storrs on the main campus in the Arjona Building, 4th Floor, or contact the office at (860) 486-4705, or https://studenthealth.uconn.edu for services or questions.

Accommodations for Illness or Extended Absences

Please stay home if you are feeling ill and please go home if you are in class and start to feel ill. If illness prevents you from attending class, it is your responsibility to notify your instructor as soon as possible. You do not need to disclose the nature of your illness, however, you will need to work with your instructor to determine how you will complete coursework during your absence.

If life circumstances are affecting your ability to focus on courses and your UConn experience, students can email the Dean of Students at dos@uconn.edu to request support. Regional campus students should email the Student Services staff at their home campus to request support and faculty notification.

COVID-19 Specific Information: People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. These symptoms may appear 2-14 days after exposure to the virus and can include:

- Fever,
- Cough,
Student Responsibilities and Resources

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important standards, policies and resources, which include:

- The Student Code
  - Academic Integrity
  - Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Credit Hours and Workload
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

Students with Disabilities

The University of Connecticut is committed to protecting the rights of individuals with disabilities and assuring that the learning environment is accessible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. Students who require accommodations should contact the Center for Students with Disabilities, Wilbur Cross Building Room 204, (860) 486-2020 or http://csd.uconn.edu.

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government. (Retrieved March 24, 2013 from Blackboard's website)

Software/Technical Requirements (with Accessibility and Privacy Information)

The software/technical requirements for this course include:

- HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement, HuskyCT/ Blackboard Privacy Policy)
- Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)
- Google Apps (Google Apps Accessibility, Google for Education Privacy Policy)
- Microsoft Office (free to UConn students through uconn.onthehub.com) (Microsoft Accessibility Statement, Microsoft Privacy Statement)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).
- WebCam

For information on managing your privacy at the University of Connecticut, visit the University's Privacy page.

NOTE: This course has NOT been designed for use with mobile devices.
Help

Technical and Academic Help provides a guide to technical and academic assistance.

This course uses the learning management platform, HuskyCT. If you have difficulty accessing HuskyCT, you have access to the in person/live person support options available during regular business hours through the Help Center. You also have 24x7 Course Support including access to live chat, phone, and support documents.

Student Technology Training

Student technology training is now available in a new HuskyCT short course created by students for students. It will prepare you to use the IT systems and services that you will use throughout your time at UConn, whether learning online or on-campus. It is available at https://lms.uconn.edu/ultra/courses/_80016_1/cl/outline.

Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics or hyperlinks.
- Work within two or more browser windows simultaneously.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the Computer Technology Competencies page for more information.

Evaluation of Course Experience

Students will be given an opportunity to provide feedback on their course experience and instruction using the University's standard procedures, which are administered by the Office of Institutional Research and Effectiveness (OIRE).

The University of Connecticut is dedicated to supporting and enhancing teaching effectiveness and student learning using a variety of methods. The Student Evaluation of Teaching (SET) is just one tool used to help faculty enhance their teaching. The SET is used for both formative (self-improvement) and summative (evaluation) purposes.

Additional informal formative surveys and other feedback instruments may be administered within the course.