

**Instructor:** Dr. Keith Rice

**Office Hours:** Tuesday & Thursday 11:00 – 11:50am  
or by appointment

**Office Phone, Room  
Number & e-mail:** 346-4454, Science B-307, krice@uwsp.edu

This course is an intermediate level cartography course that focuses on graphic design and map production techniques. The graphic elements of a map and their role in the physical and perceptual structure of the map image will be examined, as well as, graphic communication principles and the various methodologies used in map production. Topics will include: visual composition, controls & constraints of graphic features, map design nomenclature and planning objectives, map layout, typography, automated labeling, principles of color mapping, designing map animations, online mashup templates and social media maps. Emphasis will be given to the applications of map design in web mapping, animation, and online story maps during the second half of the semester. Most of these map topics will be explored by using a variety of software, including many Adobe products (e.g. *Illustrator*, *Dreamweaver*) and ESRI's ArcGIS suite.

**Lectures:** Lecture sessions will be on Tuesday and Thursday mornings, and will concentrate on both the basic theoretical and applied mapping considerations in the design and production of paper and digital thematic and reference maps.

**Laboratory:** There is one lab session, two hours in length on Tuesday afternoon, will deal with the development of mapping projects and the discussion of cartographic problems. In some instances lab time may also be used to continue lectures from the morning hour. There will be 10 lab projects, each counting between 5 to 8 percent of your grade, for a total of 63 percent of your grade for the course (the worth of each lab is denoted on the "*Outline of Course*" page by the topic of each Lab assignment (on the right)). The requirements for each laboratory session will be detailed in material to be distributed each week. It should be noted that most of the laboratory projects will take longer than the allocated lab session time. Assignments will require the usage of one or more of the Geography/Geology computer labs (Science B-308, B-346 and B-312). B-308 is a classroom in which computers are available only when a class is not in session. Some assignments may require the use of only one laboratory (due to software availability). Lab projects need to be handed in on or before the due date indicated by the instructor. Similarly, reading assignments should be completed before the class session for which they are assigned.

**Texts:** **Cartography: Thematic Map Design**, 6th edition, by Borden Dent, Jeffrey Torguson, and Thomas Hodler, McGraw-Hill Higher Education, 2009. [*Text Rental Book*]

**Thematic Cartography & Geographic Visualization**, 3<sup>rd</sup> edition, by Terry A. Slocum, Robert B. McMaster, Fritz C. Kessler and Hugh H. Howard, Prentice-Hall, 2009  
[*Text Rental Book*]

**Examinations:** There will be two examinations, a **midterm** on March 20<sup>th</sup> in class, covering the first seven weeks of the course and a comprehensive **final** exam (Wednesday, May 16<sup>th</sup>, 12:30 - 2:30pm). The midterm will be composed almost exclusively of multiple-choice and matching questions, focusing on the concepts, principles, and application of map design and production problems. It will count 17 percent of your final grade. The final examination will be worth 20 percent of your course grade, and will be in a format similar to the midterm.

**Readings:** A separate handout will detail the reading assignments for the semester. Additional materials, however, such as articles, may also be given intermittently.

**Evaluation & Grading:**

***Maximum Points***

Laboratories (ten total, 5 -8 points apiece)	63 points
Midterm Exam	17
Final Exam	20
Total	<hr/> 100 points

Ranges of percentage scores, exam points, course points, and their approximate equivalent letter grades are shown below. By referring to this table you can determine your letter-grade standing in the course.

<u>Percent</u>	<u>5 Pt Lab</u>	<u>6 Pt Lab</u>	<u>7 Pt Lab</u>	<u>8 Pt Lab</u>	<u>Course Pts.</u>	<u>Letter Grade</u>
93-100	4.7	5.6	6.5	7.4	93	A
90	4.5	5.4	6.3	7.2	90	A-
87	4.4	5.2	6.1	7.0	87	B+
83	4.2	5.0	5.8	6.6	83	B
80	4.0	4.8	5.6	6.4	80	B-
77	3.9	4.6	5.4	6.2	77	C+
73	3.7	4.4	5.1	5.8	73	C
70	3.5	4.2	4.9	5.6	70	C-
67	3.4	4.0	4.7	5.4	67	D+
63	3.2	3.8	4.4	5.0	63	D
<63	<3.2	<3.8	<4.4	<5.0	<63	F

**Attendance:** Although class attendance records will not be kept, it is strongly urged that class sessions not be missed. The material of every class lecture is built upon all previous class material, and is highly integrated with the lab assignments. Consequently, inordinate attendance lapses severely handicap the ability of the student to complete all the assignments on time.

**Student Rights and Responsibilities:** Please make note of the following web-based pdf documents, that explains your responsibilities and rights within the UWSP campus community, including required behavior by students and faculty within the classroom environment: <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/rightsCommBillRights.pdf>, and <http://www.uwsp.edu/stuaffairs/Documents/RightsRespons/SRR-2010/rightsChap14.pdf>

**Accommodations for Students with Disabilities:**

UWSP is committed to providing reasonable and appropriate accommodations to students with disabilities and temporary impairments. If you have a disability or acquire a condition during the semester where you need assistance, please contact the Disability and Assistive Technology Center on the 6th floor of Albertson Hall (library) as soon as possible. DATC can be reached at 715-346-3365 or DATC@uwsp.edu.

## OUTLINE OF COURSE

<u>Week</u>	<u>Topic</u>	<u>Lab</u>
<b><u>January</u></b>		
23 & 25	Introduction and Course Overview The Map Design Process Graphic Composition – syntactic guidelines	-----
<b><u>February</u></b>		
(Jan 30) & 1	Visual Composition & Graphic Elements	1: Symbol Design (6)
6 & 8	Graphic Elements and Map Design The Foundational Graphic Elements	2: Graphic Map Design (5)
13 & 15	Map Layout – Title, Legend & Insets Typography Design in Maps Type Size, Form, Style, Placement	3: Typographic Design (6)
20 & 22 (5)	Digital Compilation and Type Layout - mastering typographic guidelines  Labeling Alignment, Spacing, Offset and Type Layout	4A: Digital Type Compilation Freehand Style Placement
<b><u>March</u></b>		
(Feb 27) & 1	Automated Type Layout ArcGIS Maplex Labeling Engine Placement Properties, Conflict Detection Weighting, Offset & Scale Ranging	4B: Digital Type Compilation Automated Labeling (5)
6 & 8	Principles of Color The Psychology of Color Use of Color in Mapping	5: Multi-color Map Design (5) <i>four color separation &amp; process color</i>
13 & 15	The Map Critique Process Evaluative Map Improvement Web Map Design & Publishing Midterm Review Session	6: Thematic Map Design (5) Critique & Enhancement
20	<b>Midterm Exam</b>	
22	Designing Animated Maps Animation Scripting & Presentation Map Animation Interactivity	7: Web Mapping & (5) Design Principles
27 & 29	-- <i>Spring Break Vacation</i> --	

## April

3 & 5	Animation Scripting & Programming Multiple Screen Displays & Scaling Google API Mashups & Javascript Prevalent Mashups and Design Issues	8: Interactive Web Animation (7)
10 & 12	Online Mapping and Social Media Data Twitter and Community Visualization Social Media Data Sourcing	9: Social Media Mapping (6)
17 & 19	Designing ArcGIS Story Maps Narrative Development Verbal Commentary & Storyboards	10: ArcGIS Story Maps & Geographic Narratives (8)
24 & 26	Story Map Templates & Customization ArcGIS Online Map Layers Story Map Development Strategies Map Services & Configurations	<i>[Lab 10 group work sessions]</i>

## May

1 & 3	Distributed & Mobile Mapping Virtual Web Tours Virtual & Mixed Environments Visualizing Map Cyberspace	<i>[Lab 10 group work sessions]</i>
8 & 10	New Map Horizons Alternative Map Displays Course Evaluation & Final Exam Review	-----

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**Final Exam: Wednesday, May 16<sup>th</sup>; 12:30pm – 2:30pm**

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### *Comments:*

*(1) The worth of each laboratory (in points) is denoted within the parentheses next to each lab title.*

*(2) This schedule is tentative and is subject to changes during the course of the semester.*