

# MAP USE (GEOG 281)

New Mexico State University  
Department of Geography

## FALL 2011

**Lecture:** Mon & Wed, 11:30-12:20; Breland Hall 185

**Lab M1A:** Thu, 9:00-11:30; Breland Hall 185; T.A. Alanna

**Lab M1B:** Fri, 12:30-15:00; Breland Hall 185; T.A. Daniel

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**Professor: Dr. Michaela Buenemann**

Office: Breland Hall #139

☎ (575) 646-3509 (emergencies only, please; otherwise, use email)

✉ [elabuen@nmsu.edu](mailto:elabuen@nmsu.edu)

Office Hours: Mon, 9:30-10:30 & 12:30-13:30; Tue, 8:30-12:30 & 14:00-16:00, Wed, 9:30-10:30 & 12:30-13:30. Sign up on my door to ensure my time is all yours! If the 10 office hours I'm offering conflict with your schedule, please contact me to make an appointment at least one week in advance.

**T.A.**

**Daniel Estrada**

Office: Breland Hall #176; ✉ [estrada@nmsu.edu](mailto:estrada@nmsu.edu); ☎ (575) 646-5755

Office Hours: Tue & Thu, 13:00-14:00, Fri, 15:15-16:15

**Alanna Jentgen**

Office: Breland Hall #140; ✉ [ajentgen@nmsu.edu](mailto:ajentgen@nmsu.edu); ☎ (575) 646-4608

Office Hours: Mon, 10:30-11:30 & 14:00-15:00, Wed, 10:30-11:30, By appointment

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## Course Description

This course introduces you, through lectures and both indoor and outdoor labs, to the fundamental concepts (e.g., map scale, map projections, spatial reference systems, map symbols, map propaganda) and techniques (e.g., using compasses and global positioning systems) of map use (i.e., map reading, analysis, and interpretation). We will explore the cartographic medium using a variety of examples. We will discuss the complex roles of both the map maker and map user involved in map analysis and interpretation. **The ultimate goal is for you to become functionally map literate**, i.e., to acquire the knowledge and skills necessary for proficient and critical map use. This course is a core course in the Geography Curriculum at NMSU, serving as the foundation of various classes, including Air Photo Interpretation (GEOG 382), Cartography (GEOG 381), Fundamentals of GIS (GEOG 481), and Introduction to Remote Sensing (GEOG 373).

## Student Learning Outcomes

Upon completion of this course, you should be able to:

1. measure distances and bearings on maps;
2. use magnetic compasses and GPS instruments for basic land navigation and map making;

3. describe physical and cultural spatial patterns portrayed on maps;
4. analyze and interpret the significance of spatial patterns portrayed on maps;
5. perform elementary spatial statistical analysis on geographic data;
6. critically evaluate maps for evidence of information misuse or propagandist motives; and
7. use appropriate map categories, symbols, projections, and spatial reference systems to portray, read, analyze, and interpret geographic data.

## Course Structure

This is a **fast-paced course with a steep learning curve**. The course introduces a variety of interrelated concepts and methods relevant to map reading, analysis, and interpretation. We will deal with new concepts and methods every week and each is treated more or less separately in the lectures and labs. However, you can only become an excellent map user and maker if you understand all concepts and methods discussed in this course and how they relate. It is thus crucial that you always keep up with the lectures and labs. **WE** will do our very best to **FACILITATE LEARNING** (i.e., to help you achieve the learning outcomes stated above)—we will always prepare and present class materials to the best of our abilities; give you tasks that will help you better understand key concepts and techniques; and encourage cooperative learning and class discussions. **YOU** are **RESPONSIBLE** for **LEARNING ITSELF**.

## Course Materials

### Website

Materials for this course (e.g., lectures, labs, grades) can be found at <https://learn.nmsu.edu/>. To access course materials, simply log in to your Blackboard account and click the link for this course. The website is a key element of this course and you are required to review its contents regularly. If you encounter problems related to the website, please contact us immediately.

### E-mail

Official communication to you will often come through your NMSU e-mail box, not through your Gmail or other personal non-NMSU e-mail box. Access your NMSU e-mail regularly, or forward it to your current use address, as your success in college may ride on your ability to respond quickly. We do NOT use the e-mail tool in Blackboard. All e-mail correspondence in this class must occur via NMSU email. To guarantee a response, your emails should a) begin with a proper greeting that includes the name of the person/s you are emailing; b) conclude with a closing that includes your name; and c) use proper spelling, grammar, capitalization, and punctuation. Expect responses to your emails within 24 hours, except weekends and holidays.

### Textbook

Kimerling, A.J., A.R. Buckley, P.C. Muehrcke, and J.O. Muehrcke. 2009. *Map Use*. 6th ed. Redlands, CA: ESRI Academic Press.

## Grading

Your final course grade is determined by the amount of points you accrue out of a total possible 1000 points.

<b>Exams (× 4):</b>	500 points	50%	} <b>1,000 Points (100%)</b>
<b>Navigation Labs (× 4):</b>	200 points	20%	
<b>Other Labs (× 4):</b>	100 points	10%	
<b>Map Project (× 1):</b>	150 points	15%	
<b>Peer Evaluation (× 1)</b>	50 points	5%	

Your final course letter grade will be based on the following scale:

<b>A</b>	95-100%	<b>B</b>	84-86%	<b>C</b>	74-76%	<b>D</b>	64-66%
<b>A-</b>	90-94%	<b>B-</b>	80-83%	<b>C-</b>	70-73%	<b>D-</b>	60-63%
<b>B+</b>	87-89%	<b>C+</b>	77-79%	<b>D+</b>	67-69%	<b>F</b>	< 60%

Individual assignments and tests will not be curved (↑ or ↓). We *may* make adjustments of the final letter grade after an assessment of the class curve at the end of the term. We consider class participation, attendance, and improvement over the term as justification for discounting a grade that is uncharacteristically lower than others.

**Exams:** There will be four exams, each comprehensive and building on concepts covered throughout the course up to the point of the exam. The exams will each account for 12.5% (125 points) of your final course grade or for a combined total of **50%** (500 points). **Make-up**

**exams:** If you have a legitimate excuse for a University-sanctioned activity or work-related event that will cause you to miss an exam, contact us prior to the official exam time so that we can schedule a make-up exam, and provide us with written documentation prior to or on the day of your make-up exam. If you have to miss an exam due to illness, contact us as soon as possible so that we can schedule a make-up exam, and provide us with written documentation on the day of the exam. If you fail to follow these guidelines or if you miss an exam for other reasons, you will receive 0 points for the exam.

**Labs:** There will be four in-class lab exercises, each accounting for 2.5% (25 points) of your final course grade, as well as four navigation (outdoor) lab exercises, each accounting for 5% (50 points) of your final course grade. In conjunction, the labs will determine **30%** (300 points) of your final course grade and are thus crucial to your overall success in this course. There are deadlines for submission of maps and related products in the real world. To reinforce this and to teach you to work under these restrictions, late submissions will not be accepted!

**Map Project:** This project will consist of a short paper in which you describe, analyze, and interpret the physical and cultural features of a single topographic map that you choose and that also meets Dr. Buenemann’s approval. The map project will determine **15%** (150 points) of your final grade. Late submissions will not be accepted!

**Peer Evaluation:** Your active and constructive participation in this course is crucial to your success in the course and to the enrichment of your peers’ experience as well. We acknowledge this importance of your participation by allocating **5 %** (50 points) of your final course grade to it. Your participation will be evaluated by us and your peers based largely on the following criteria: attendance; participation in class and lab discussions and activities; and general behavior (e.g., assistance to other students; ability to compromise and respect other people’s ideas; ability to motivate others; etc.).

**Further details regarding all of the above will be provided to you in class, lab, and/or on the course website.**

## Policies, Codes, Etc.

**CODE OF ACADEMIC INTEGRITY:** Enrollment in this course and acceptance of this syllabus is your **contract** constituting acceptance of all University policies regarding academic integrity, including but not limited to cheating and plagiarism. You are expected to comply fully with the NMSU Honor Code as presented in the Student Code of Conduct Handbook (<http://www.nmsu.edu/~vpsa/SCOC/index.html>). Students who are judged to be guilty of academic dishonesty (see Section III of the Handbook or <http://www.nmsu.edu/~vpsa/SCOC/misconduct.html>) on any graded class component will receive no points for that component, and the instructors reserve the right to consider more severe penalties such as failure of the course and referral to the Dean and Student Judicial Affairs.

**STUDENTS WITH DISABILITIES:** If you have, or believe you have a disability, you may contact the Student Accessibility Services (SAS) Office located in Corbett Center, Room 244, 575-646-6840, or email [sas@nmsu.edu](mailto:sas@nmsu.edu). Appropriate accommodations may then be provided for you. All medical information will be treated confidentially. If you have a condition which may affect your ability to exit safely from the premises in an emergency during class, you are encouraged to discuss this in confidence with the instructor and/or the Director of University Disability Services/ADA Coordinator, Diana Quintana, at the SAS Office. Questions regarding the Americans with Disabilities Act (ADA), the American with Disabilities Amendment Act and/or Section 504 of the Rehabilitation Act of 1973 should be directed to the SAS Office.

**NON-DISCRIMINATION:** Contact Gerard Nevarez, Office of Institutional Equity, at 575-646-3635 concerning any questions you may have about NMSU's Non-Discrimination Policy (<http://www.nmsu.edu/~vpsa/APAP/nondiscrimination.html>) and complaints of discrimination.

**ABSENCE POLICY:** Absences due to University-sanctioned activities, work-related events, holidays or special events observed by organized religions, or illness will be excused, if you provide us with official written documentation explaining your absence. We don't really have any additional absence policies. Just keep the following two things in mind: (1) learning is your responsibility and, if you miss a lecture or lab, you will have to figure out how to "make it up;" (2) you will only receive credit for in-class opportunities if you attend class.

**WITHDRAWALS AND INCOMPLETES:** Withdrawals from this course are solely your responsibility; we will not withdraw or drop you from this class under any circumstances! If you no longer wish to be enrolled in this course, you must drop it. Students still on the class roll at the end of the semester will be issued grades based on work completed. Incomplete grades will not be given except in the case of extraordinary situations related to serious illness, bereavement, or personal crises; documentation will be required in these limited cases, and incompletes will be granted solely at our discretion.

**WHAT YOU CAN EXPECT FROM US:** We will be available in class, during office hours and scheduled appointments, and via email to respond to any questions or concerns you may have. Don't be shy and contact us as soon as ambiguities, problems, or concerns arise! We will take all of your concerns seriously and respond to you as soon and as specific as possible. We will address any issues that are of importance to all students in class and on Blackboard. We will do our very best to always be prepared for class, grade assignments fairly, and return your work promptly (within one week). We reserve the right to change scheduled lectures, exams, and assignments. Any changes made will not adversely affect your workload or grade.

**WHAT WE EXPECT FROM YOU:** Enrollment in this course and acceptance of this syllabus is your **CONTRACT** constituting acceptance of ALL New Mexico State University policies and codes as well as ALL specific policies outlined in this syllabus. We expect you to be on time for all class-related activities, submit all tasks as instructed, and always show "good" behavior toward both your instructor and peers. **HAVE FUN!!!**



## Tentative Course Outline

1	08/22	A Warm Welcome & Syllabus
	08/24	<b>Introduction, History of Cartography</b> (Intro Parts I & II: pp. 2-3 & 228-229) <i>No Lab</i>
2	08/29	<b>Basic Map Types</b> (Introduction: xiv-xxviii)
	08/31	<b>Map Scale &amp; Distance Finding</b> (Ch. 2: 22-33; Ch. 11: 230-246) <i>Lab #1: Atlases</i>
3	<b>09/05</b>	<b>Labor Day</b>
	09/07	<b>Direction &amp; Position Finding</b> (Ch. 12: 248-267; Ch. 13: 268-294) <i>Lab #2: Topo Map Basics: Map Scale</i>
4	09/12	<b>Relief Portrayal &amp; Surface Analysis</b> (Ch. 6: 100-125; Ch. 16: 345-365)
	09/14	<b>The Great Survey – Video</b> <i>Lab #3: Topo Map Basics: Distance, Direction, and Topography</i>
5	09/19	<b>Map Projections</b> (Ch. 3: 34-61)
	09/21	Review <i>Lab #4: Navigation 1 – Group A</i>
6	<b>09/26</b>	<b>Exam #1</b>
	09/28	<b>Earth Coordinate Systems</b> (Ch. 1: 4-20) <i>Lab #4: Navigation 1 – Group B</i>
7	10/03	<b>Grid Coordinate &amp; Land Partitioning Systems</b> (Ch. 4: 62-80; Ch. 5: 82-99)
	10/05	<b>Qualitative Thematic Maps</b> (Ch. 7: 126-144) <i>Lab #5: Navigation 2 – Group A</i>
8	10/10	<b>Landforms on Maps</b>
	10/12	<b>Landforms on Maps Cont. &amp; Review</b> <i>Lab #5: Navigation 2 – Group B</i>
9	<b>10/17</b>	<b>Exam #2</b>
	10/19	<b>Place Names, Map Selection for Map Project Due!</b> <i>Lab #6: Navigation 3 – Group A</i>
10	10/24	<b>Map Misuse and Propaganda</b> (Introduction: xxiv-xxvi)
	10/26	<b>Map Misuse and Propaganda Cont., Exam #3 Out</b> <i>Lab #6: Navigation 3 – Group B</i>
11	10/31	<b>Global Positioning Systems</b> (Ch. 14: 296-321)
	<b>11/02</b>	<b>Physical Quantitative Thematic Maps</b> (Ch. 8: 146-182), <b>Exam #3 Due!</b> <i>Lab #7: Navigation 4 – Group A</i>
12	11/07	<b>Cultural Quantitative Thematic Maps</b> (Ch. 8: 146-182)
	11/09	<b>Geographical Boundaries</b> <i>Lab #7: Navigation 4 – Group B</i>
13	11/14	<b>Area &amp; Volume Measures</b> (Ch. 15: 322-344), <b>Map Project Due!</b>
	11/16	<b>Spatial Pattern &amp; Association Analysis</b> (Ch. 17: 366-390; Ch. 18: 392-415)

		<i>Lab #8: Spatial Analysis</i>
<b>14</b>	<b>11/21</b>	<b><i>Thanksgiving</i></b>
15	11/28	<b>Map Accuracy and Uncertainty</b> (Ch. 10: 204-227)
	11/30	<b>Maps in the Field &amp; Review</b> (Ch. 10: 204-227)
		<i>Make-Up Labs?</i>
16	<b>12/07</b>	<b>FINAL EXAM: 10:30 AM-12:30 PM</b>