

# SOUTHWEST ENVIRONMENTS (GEOG 455/555)

New Mexico State University  
Department of Geography

## SPRING 2015

Lecture: Mon & Wed, 15:30 – 16:45; Breland Hall 192

**Professor: Dr. Michaela Buenemann**

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Office Hours: Mon: 9:00 – 9:45, 11:30-12:30, 13:30-14:45, 16:45-17:30; Tue: 10:15-11:30, 15:00-17:00; Wed, 9:00-9:45, 16:45-17:15; Thu, 10:15-11:30; Fri, 11:30-12:00. Sign up on Dr. B.'s door to ensure her time is all yours! If the 10 office hours she's offering conflict with your schedule, please contact her to make an appointment.

**T.A.: Curtis Atherton**

Office: Breland Hall 178; ✉ [atherton@nmsu.edu](mailto:atherton@nmsu.edu); ☎ (575) 646-5755

Office Hours: Thu, 11:00-14:00; by appointment

## COURSE DESCRIPTION

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The U.S. Southwest is recognized around the world for its spectacular scenery. The region is also becoming increasingly known for a range of environmental issues, however (e.g., desertification). This course allows you to explore the **physical** (e.g., climate, soils, vegetation) and **human** (e.g., land use) dimensions of the Southwest and the overall **spatial** and **temporal** picture resulting from their **coupled and dynamic interactions**. Moreover, using a **systems approach**, the course allows you to critically evaluate the natural and societal causes and consequences of specific **environmental issues** in the Southwest and their implications for **sustainability**. Finally, and importantly, this 'capstone' experience provides you with numerous opportunities to demonstrate (and improve) your mastery of knowledge and skills in geography.

## STUDENT LEARNING OUTCOMES

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

- summarize the spatio-temporal interactions between nature and society in the U.S. Southwest;
- analyze, synthesize, and evaluate evidence concerning how these interactions have produced a series of specific environmental problems in the U.S. Southwest; and
- assess critically the challenges and potentials of sustainability in the U.S. Southwest.



## COURSE STRUCTURE

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This course is probably a little different from other courses you have taken: for example, instead of assuming that you know very little about the course topics and discussing a new topic in every class meeting, we assume that you bring substantial mastery of knowledge and skills to the table and provide you with lots of opportunities to demonstrate (and improve) this mastery. The course is divided into five main parts: each begins with a quick introduction to the key topic using a more conventional classroom approach and concludes with the completion of a student-centered learning activity or project pertaining to this topic. As always, **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 and give you tasks that will help you better learn key concepts and techniques. **YOU** are **RESPONSIBLE** for **LEARNING ITSELF**.

## COURSE MATERIALS

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**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 Canvas 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 come through your NMSU e-mail account, not through your Gmail or other personal non-NMSU e-mail account. 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. To guarantee a response to your emails, always a) begin your emails 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.

**Required Textbook.** There is no required “textbook” for this class, because no existing textbook adequately covers all of the material that we’ll be discussing in class. However, a number of readings will be made available to you to help you acquire the stated learning outcomes. In addition, we expect you to identify and review further relevant readings on your own.

## GRADING

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

<b>Team Exams (× 2):</b>	100 points	10 %	} <b>1,000 Points (100%)</b>
<b>Individual Exams (× 2):</b>	200 points	20 %	
<b>Team Activities (× 3):</b>	200 points	10 %	
<b>Team Projects (× 2):</b>	400 points	40 %	
<b>Time and Effort Reports (× 13 + 1):</b>	70 points	7 %	
<b>Other Participation (× 1)</b>	30 points	5 %	

Graduate Students: Upon completion of this course, the number of points listed above for undergraduate students will be adjusted to account for only 80 % of your final grade. You will earn the remaining 20% of your final grade through completion of additional projects.

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.

**Team and Individual Exams:** Many **Learning Outcomes (LOs;** i.e., descriptions of things you should be able to do) could be formulated for each course topic, but some are particularly crucial to help you acquire the three overall LOs of this course (p. 1). To help you stay focused on the important issues, we will provide you with a set of “crucial LOs” (i.e., **study guide**) for every topic and assess the degree to which you have acquired these LOs using individual and team exams. The team exams are take-home exams and essentially compilations of written responses to all LOs. The team exams each account for 5% (50 points) of your course grade, or for a combined total of **10%** (100 points). The individual exams are in-class exams, assess your learning based on your responses to some of the LOs, and happen after you have received feedback on your team exams. The individual exams each account for 10% (100 points) of your course grade, or for a combined total of **20%** (200 points). **Make-up individual 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.

**Team Activities & Projects:** Active participation in class and active interaction with course materials outside of class are crucial for you to learn, and we will provide you with many opportunities to do just that. By actively engaging with your peers in three activities and two projects this semester, you may earn up to **60%** (600 points) of your final course grade, whereby the activities account for 20% (200 points) and the projects for 40% (400 points) of that total.

**Time and Effort Reports (TERs):** To enhance your sense of responsibility towards yourself and your team, you are required to submit a total of thirteen weekly TERs, each accounting for 4 points (0.4%) of your final course grade, as well as a summary TER, which accounts for 18 points (1.8%) of your final course grade. In conjunction, the TERs will thus add up to 70 points (7%) of your final course grade.

**Teams & Peer Evaluations:** Collaboration is an important component of most jobs and tends to be very rewarding. We thus encourage collaboration throughout the semester. To facilitate the process, you will be divided into teams, each comprised of three to five students. Each team will be made up of a diversity of individuals, but different teams will be comparable to each other (e.g., each team will be composed of roughly the same number of geography and non-geography majors). Members of every individual team will complete a variety of tasks as just that—a team. However, while each team member will initially receive the same grades as all other team members, adjustments of each team member’s grades (upward or downward) will be made based on peer evaluations that assess an individual’s contribution to the success of the team (e.g.,

preparedness, reliability, participation in discussions, ability to compromise). It is thus in your own best interest to always be prepared and contribute as much as possible to all teamwork.

**Other Participation:** In addition to the above, your participation in this class will be evaluated by us using your attendance record as well as two-minute papers and other miscellaneous in-class tasks. Other participation will contribute **3%** (30 points) toward your final course grade.

**Additional Requirements for Grad Students:** If you are a graduate student, you are required to write a literature review pertaining to an environmental issue in the U.S. Southwest.

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

## **POLICIES, CODES, ETC.**

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**Students with Disabilities.** Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act Amendments Act (ADAAA) covers issues relating to disability and accommodations. If you have questions or need an accommodation in the classroom (all medical information is treated confidentially), contact: Trudy Luken, Director; Student Accessibility Services (SAS) - Corbett Center, Rm. 244; Phone: (575) 646-6840 E-mail: sas@nmsu.edu; Website: <http://sas.nmsu.edu/>

**Non-Discrimination.** NMSU policy prohibits discrimination on the basis of age, ancestry, color, disability, gender identity, genetic information, national origin, race, religion, retaliation, serious medical condition, sex, sexual orientation, spousal affiliation, and protected veterans status. Furthermore, Title IX prohibits sex discrimination to include sexual misconduct: sexual violence (sexual assault, rape), sexual harassment and retaliation. For more information on discrimination issues, Title IX, Campus SaVE Act, NMSU Policy Chapter 3.25, NMSU's complaint process, or to file a complaint contact: Gerard Nevarez, Title IX Coordinator; Agustin Diaz, Title IX Deputy Coordinator; Office of Institutional Equity (OIE) - O'Loughlin House, 1130 University Avenue; Phone: (575) 646-3635 E-mail: equity@nmsu.edu; Website: <http://www.nmsu.edu/~eoo/>

**Other NMSU Resources.** NMSU Police Department: (575) 646-3311, [www.nmsupolice.com](http://www.nmsupolice.com); NMSU Police Victim Services: (575) 646-3424; NMSU Counseling Center: (575) 646-2731; NMSU Dean of Students: (575) 646-1722; For Any On-Campus Emergencies: 911

**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://deanofstudents.nmsu.edu/student-handbook/1-student-code-of-conduct/>). Students who are judged to be guilty of academic dishonesty (see Section III of the Handbook or <http://deanofstudents.nmsu.edu/student-handbook/1-student-code-of-conduct/3-academic-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.

**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 in mind: learning is your responsibility and, if you miss a lecture or lab, you will have to figure out how to "make it up;" your peers will evaluate you in terms of your contributions to the success of your team and the class and these evaluations will be used to convert team grades to individual grades.

**Withdrawal and Incomplete Grades.** Withdrawal from this course is solely your responsibility; we will not drop you from this class under any circumstances. If you no longer wish to be enrolled in this course, you must withdraw from it. If you are still on the class roll at the end of the semester, you will receive a grade based on the work submitted. An Incomplete, or I, grade will be given only if you are unable to complete the course due to circumstances beyond your control that develop after the last day to withdraw from the course (e.g., documented illness or documented death or crisis in the student's immediate family). An I grade will not be given to avoid the assigning of D, F, U, or RR grades for marginal or failing work.

**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 Canvas. 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

Week	Date	Topic <b>Individual   Team</b>	Due <b>Individual   Team</b>
* Instructions will be provided in advance and tasks are expected to be completed by the dates indicated.			
<b>PART I: GEOGRAPHIC PERSPECTIVES ON SOUTHWEST ENVIRONMENTS</b>			
2	01/19	<i>Dr. Martin Luther King, Jr. Holiday</i>	
	01/21	<b>Warm Welcome &amp; Ice Breakers</b>	
3	01/26	<b>Geographic Perspectives on Southwest Environments:</b> Geographic Perspectives (1), Defining the U.S. Southwest (2) <b>Team Activity 1: Defining the U.S. Southwest</b>	
	01/28	<b>Team Activity 1 Cont'd</b>	

<b>PART II: PHYSICAL AND HUMAN GEOGRAPHY OF THE U.S. SOUTHWEST</b>			
4	02/02	<b>Physical Geography of the U.S. Southwest:</b> Geology (3), Climate (4), Water (5), Soils (6), Biomes (7), Plants and Animals (8) Presentations of Team Activity 1	✓ <b>TER 1</b> ✓ <b>Team Activity 1</b>
	02/04	<b>Human Geography of the U.S. Southwest:</b> Population (9), Identity (10), Settlements (11), Economy (12), Politics (13), Religion (14), Land Use and Land Tenure (15)	
5	02/09	<b>Team Project “Geography Field Trip through the U.S. Southwest”</b> Task 1: Battle Plan*	✓ <b>TER 2</b>
	02/11	Task 2: Matrix of Field Trip Stops*	
6	02/16	Task 3: Template for Field Trip Stop Descriptions in Report; Raw Data for Remaining Stop*	✓ <b>TER 3</b>
	02/18	Task 3 Cont’d*	
7	02/23	Task 4: Draft Field Trip Report*	✓ <b>TER 4</b> ✓ <b>Team Exam 1</b>
	02/25	Task 4 Cont’d*	
8	03/02	Task 5: Revised Field Trip Report; Draft Presentation, Draft Web Map*	✓ <b>TER #5</b>
	03/04	Task 5 Cont’d*	
9	03/09	Task 6: Final Field Trip Report; Final Presentation; Final Web Map; Miscellaneous Tasks*	✓ <b>TER #6</b> ✓ <b>Field Trip Project</b>
	03/11	<b>Individual Exam 1</b>	
<b>PART III: COUPLED HUMAN-ENVIRONMENT SYSTEMS</b>			
10	03/16	<b>Coupled Human-Environment Systems (CHES):</b> Pre-Columbian Era (16), Post-Columbian Era (17), Environmental Issues in the U.S. Southwest (18) Team Activity 2: Evaluation of CHES in the U.S. Southwest, Then and Now	✓ <b>TER #7</b>
	03/18	Team Activity 2 Cont’d	
11	---	<i>Spring Break (03/23-03/27): No Class</i>	
<b>PART IV: SUSTAINABILITY SCIENCE</b>			
12	03/30	<b>Sustainability Science:</b> Ecosystem Services and Human Well-Being (19), Desertification, Land Degradation, and Drought (20), Climate Change (21), Sustainability (22) Team Activity 3: Sustainability in the U.S. Southwest	✓ <b>TER #8</b>
	04/01	Team Activity 3 Cont’d	

<b>PART V: GEOGRAPHIC EXPLORATIONS OF THE CHIHUAHUAN DESERT</b>			
13	04/06	Presentations of Team Activities 2 & 3	✓ <b>TER #9</b> ✓ <b>Team Activity 2</b> ✓ <b>Team Activity 3</b>
	04/08	<b>Team Project “Scavenger Hunt in the Chihuahuan Desert”</b> Task 1: Complete Existing Scavenger Hunt*	
14	04/13	Task 2: Battle Plan*	✓ <b>TER #10</b> ✓ <b>Team Exam 2</b>
	04/15	Task 3: Draft Directions for Stops*	
15	04/20	Task 4: Draft Materials for Stops*	✓ <b>TER #11</b>
	04/22	Task 5: Revised Directions and Materials for Stops*	
16	04/27	<b>Individual Exam 2</b>	✓ <b>TER #12</b>
	04/29	Task 6: Final Directions and Materials for Stops*	✓ <b>Scavenger Hunt Project</b>
17	05/04	<b>Task 7: Scavenger Hunt* (15:30-17:30)</b> <b>TER #13, Summary TER</b> 	