Syllabus (Version 1 - Subject to Change) for:

Arid Lands

GEOG 4307 (CRN 28715), ESCI 5307 (CRN 28716)

Spring Semester 2021- Class Meeting Online 1:00 to 1:50 Wed – Otherwise Asynchronous

Instructors: Dr. Tom Gill, Geology 401A: 747-5168: E-mail: tegill@utep.edu
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TA: TBA

Office Hours tba, and by appointment.

Required Text: *Deserts and desert environments*, by Julie Laity, 2008 (Laity) John Wiley & Sons. ISBN 978-1-57718-033-3

Additional text: *Global Deserts Outlook*, by U.N. Environment Programme***,*** 2006 (GDO) Available online at http://www.unep.org/geo/gdoutlook/ and on Blackboard. PDF downloadable at http://www.unep.org/pdf/Global_Deserts_Outlook.pdf

Additional readings will be assigned on a week-to-week basis.

Course Description

A study of the physical complexes of the world's dry regions. Salient factors emphasized include climate, landforms, water, soils, natural vegetation and human occupance. Prerequisites: GEOG 1306 or GEOG 1310 or GEOL 1303 or GEOL 1311 or GEOL 1313, or consent of instructor. GEOG 3306 is recommended.

Specifically students will learn

1. The definition, extent, and geographic features of drylands (arid, semiarid, and subhumid).
2. The geological processes that shape and characterize drylands.
3. The atmospheric and climatic conditions that create and characterize drylands.
4. The role of water and the hydrologic cycle in drylands.
5. The soils, ecosystems and biota of dry landscapes.
6. The human histories, occupation, and land use of some of the world's most important deserts.

If the situation permits, there will be several one-day field trips during the course of the semester.

Grading (for undergraduate credit): Extra credit assignments- TBA.
Final exam (not completely comprehensive) 20% : date and format TBA.
Homework assignments: 30% – For each chapter covered in the test, Drs. Langford and Gill will develop approximately ten critical thinking questions based on the lecture and/or assigned readings. Several of these questions will be assigned to be answered as a take-home homework assignment every week.
Quizzes/tests 50% – Approximately every three weeks (five times during the semester), there will be an in-class test (taking up the class period) covering the understanding of these key questions for a set of two or three chapters (for example, one test might cover Desert Hydrology and Desert Lakes).
There will be required readings from one or both texts every week, as well as additional readings assigned during many weeks.

For graduate credit, students must additionally write a professional research paper on one aspect of Arid Lands: the topic must be agreed to in advance (a deadline will be given) with either Dr. Gill or Dr. Langford. The paper will be in the format of the *Journal of Arid Environments* (http://www.journals.elsevier.com/journal-of-arid-environments and http://www.elsevier.com/journals/journal-of-arid-environments/0140-1963/guide-for-authors) and should summarize the recent advances in a particular topic. This assignment will comprise 15% of your overall grade: other assessments will comprise a proportionally reduced percentage of the grade assessments (tests 40%, homework 27%, final 18%). The topic of the paper will be required to be approved in advance by March 22- the first academic day after Spring Break.

Students with Disabilities: If you have (or think you may have) a disability, and need accommodation, contact the Center for Accommodations and Support Services (CASS)) at (915) 747-5148 (voice or TTY), visit their office in Union East Room 106, or by E-Mail at cass@utep.edu. CASS is the office at UTEP that is designated to determine eligibility for accommodations and services to students with disabilities, and will arrange for any necessary accommodations.

Academic (dis)honesty and other issues: Academic dishonesty is prohibited and considered a violation of the UTEP Handbook of Operating Procedures. It includes but is not limited to cheating, plagiarism, and collusion. In this class, since it is a course for advanced scientific students, you are expected to complete your own work, but working together with your classmates and others (collaboration) is encouraged though not required.

Week Of	Read Chapter		Instructor	Topic
Jan 19	Laity	1	Gill/Langford	Introduction: Defining Deserts
	GDO	Executive Summary		
Jan 25	GDO	1	Langford/Gill	Deserts of the World, part I
Feb 1	Laity	2	Langford	Deserts of the World, part II
Feb 8	Laity	3	Gill	Desert Climate / Weather
Feb 15	Laity	4	Langford	Desert Hydrology
Feb 22	Laity	5	Gill	Desert Lakes
Mar 1	Laity	6	Langford	Desert Weathering and Hillslope Systems
Mar 8	Laity	7	Langford/Gill	Desert Soils
Mar 15	SPRING BREAK			
Mar 22	Laity	8	Langford	Fluvial Geomorphology of Deserts
Mar 29	Laity	9	Langford/ Gill	Aeolian Geomorphology of Deserts
Apr 5	Laity	10	Gill / Langford	Desert Dust
Apr 12	Laity	11	Gill	Desert Ecosystems and Vegetation
Apr 19	Laity	12	TBA	Desert Animals
Apr 26	GDO 4 and 5		Gill/Langford	Desertification
	Laity	13		
May 3	GDO	2	Gill/Langford	Humans and Deserts: Desert People & Cultures
May 10	Final Exam Week- Final Exam Format and Due Date TBA			