

**George Mason University: CLIM 714 Land-Climate Interactions (3:3:0)** *Prerequisites: BS or MS in mathematics or physical science, or permission of instructor.* Interdisciplinary course providing detailed description of surface energy and water balance over land, and radiative and turbulent transfer. Introduces numerical techniques for modeling land surface and applications in weather, climate, and hydrologic forecasting and simulation. Includes hands-on experience with land surface models in computer laboratory, including sensitivity experiments to reinforce theoretical concepts. Exposure to contemporary research through reading and reviewing seminal journal papers.

CLIM 714

**Land/Climate Interactions**

Tuesday  
2:30PM - 3:30PM  
Location: R1-240

Houser

Date	Actual	Lecturers	Topic	Assignment	Due
19 Jan		PH	Intro: Land & Climate - Global Hydrology ( <a href="#">PDF</a> )		
26 Jan		PH	The Surface Energy Balance ( <a href="#">PDF</a> )	<a href="#">HW 1</a>	9 Feb
2 Feb	PH out-of-town		Previous Class Projects		
9 Feb		PH	The Surface Water Balance ( <a href="#">PDF</a> )	<a href="#">HW 2</a>	16 Feb
16 Feb		PH	Radiation & Turbulence ( <a href="#">PDF</a> )	<a href="#">HW 3</a>	23 Feb
23 Feb		PH	Land Surface Parameterizations, part 1 ( <a href="#">PDF</a> )		
2 Mar		PH	Land Surface Parameterizations, part 2 ( <a href="#">PDF</a> )		
9 Mar			<i>Spring Break</i>		
16 Mar		PH	Land Surface Parameterizations, part 3 ( <a href="#">PDF</a> )	<a href="#">Reading #1</a>	
23 Mar		PH	Land & Climate - Observational Studies ( <a href="#">PDF</a> )	<a href="#">Reading #2</a>	
30 Mar		PH	Comparison of LSMs ( <a href="#">PDF</a> , <a href="#">PPT</a> )	<a href="#">Reading #3</a>	
6 Apr	PH out-of-town		Land Use & Land Cover Change ( <a href="#">PDF</a> )	<a href="#">Reading #4</a>	
13 Apr		PH	Natural Variability/Long Term Changes ( <a href="#">PDF</a> )	<a href="#">Reading #5</a>	
20 Apr		PH	Land Data Assimilation ( <a href="#">PDF</a> )		
27 Apr		PH	Lab Presentations/Final Review ( <a href="#">PDF1,PPT1</a> ) ( <a href="#">PDF2,PPT2</a> )		Lab
11 May			<i>Final Exam</i>		

Grading:                   Homework 1/3  
                                  Computer Lab 1/3  
                                  Final Exam 1/3

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