

Lecture	Date		Lecture Topic	Lecturer	Readings	Section
1	22-Sep	Th	Introduction - How Earth works	Jeff	Chapman & Davis 2010; Kotchen & Young 2007	No section
2	27-Sep	Tu	Radiation & Earth-Sun energy balance	Jeff	Margulis 2016 ch 3; Hansen et al. 2011	Lab Exercise #1
3	29-Sep	Th	Precipitation, water vapor, & air pressure	Jeff	Margulis 2016 ch 2,5	
4	4-Oct	Tu	Planetary hydrology	Tom	Margulis 2016 ch 1; Black 1995	
5	6-Oct	Th	Water & energy balance of a vegetated soil	Tom	Dunne & Leopold 1978 ch 8	Lab Exercise #2
6	11-Oct	Tu	Evapotranspiration details	Jeff	Margulis 2016 ch 8; Wigley & Jones 1985	
7	13-Oct	Th	Land hydrology – Groundwater 1	Tom	Winter et al. 1998, pp 1-21, 30-32	
8	18-Oct	Tu	Land hydrology – Groundwater 2	Tom	Powerpoint slides on "The future of water supplies in an era of global change". Barnett 2008; Anderson & Woosley 2005, pp 1-30	Lab Exercise #2
9	20-Oct	Th	Snow & ice in the hydrologic cycle	Jeff	Margulis 2016 ch 6; Bales 2006; Dozier 2011	
Midterm this weekend (10/21/16-10/24/16, Lectures 1-9)						
10	25-Oct	Tu	Solid Earth: tectonics	Tom	Summerfield 1991 ch 3 (level of detail guided by lecture)	Lab Exercise #3
11	27-Oct	Th	Solid Earth: landscape functioning	Tom	Summerfield 1991 ch 4 (level of detail guided by lecture)	
12	1-Nov	Tu	Atmospheric circulation	Jeff	Margulis 2016 ch 4	
13	3-Nov	Th	Ocean processes & circulation	Jeff	Stewart 2008 ch 9	Lab Exercise #4
14	8-Nov	Tu	Formation of soil resources	Tom	Summerfield 1991 ch 6 (level of detail ...); Graham 2010	
15	10-Nov	Th	Erosion of continental surfaces	Tom	Dunne & Leopold Ch 15; Montgomery 2007	
16	15-Nov	Tu	Ice in the climate system	Jeff	Jeffries 2013; Turner 2014	
17	17-Nov	Th	Climate dynamics – the data record	Jeff	Chapman & Davis 2010; Crowley 2000	
18	22-Nov	Tu	Continental-scale rivers	Tom	Syvitski 2009; Deltares 2013	Lab Exercise #4
	24-Nov	Th	Holiday: Thanksgiving			
19	29-Nov	Tu	How Earth System models work	Jeff	Saltelli & Funtowicz 2014; Schiermeier 2010; Victor & Kennel 2014	Review week
20	1-Dec	Th	The End of Earth System Science	Tom	Gardner & Schulman 2005	
12/05/2016-12/09/2016		Finals Week	Final Examination on Lectures 1-20			