

date	day of week	Lecture Number	Topic	Reading (chapters in Strang and Borre (S&B) or Leick (AL))	Problem set
2010-Mar-16	Tuesday	1 1249 Eng. Hall.	First Class; positioning; Introduction to Matlab: functions, scripts, plots, etc.		
2010-Mar-18	Thursday	2 1249 Eng. Hall.	How does GPS work? How well does it work?	AL 3.2 and/or S&B 14.1; 14.2; 14.3	
2010-Mar-23	Tuesday	3 1249 Eng. Hall.	Geometry of the Ellipsoid; Geodetic Reference System; Geoid, Ellipsoid and Datum; World Geodetic System 1984; Changing Datum	S&B 14.7; (skip 14.8); 14.9; 14.10; 14.11; 14.12	
2010-Mar-25	Thursday	4 1249 Eng. Hall.	Review of Linear Algebra I: Vectors; Lengths and Dot Products; Planes;	S&B 1.1; 1.2; 1.3	
2010-Mar-30	Tuesday	SPRING BREAK	No Class Meeting		
2010-Apr-01	Thursday	SPRING BREAK	No Class Meeting		
2010-Apr-06	Tuesday	5 1249 Eng. Hall.	Review of Linear Algebra II: Matrices and Linear Equations; Heights by least squares; weighted least squares	S&B 1.4; 8.1, 8.2, 8.5. Levelling example. Examples 8.6 and 8.7 in S&B.	
2010-Apr-08	Thursday	6 1249 Eng. Hall.	Preparing for a field survey. Choosing a surveying strategy: the tradeoff between cost and accuracy. Expectations for student projects.	Log sheets, protocol, map, equipment list. Student projects from past years.	PS 1 due.
2010-Apr-10	Saturday	1:00 pm to 5:00 pm 1249 Eng. Hall.	Field Exercise 1: Point Positioning with a single receiver	Users' guide for receivers	Bring appropriate clothing for working outside. Digital camera and a GPS receiver if possible. FE report due at 5:00 PM.
2010-Apr-13	Tuesday	7 1249 Eng. Hall.	Receiver position from Code Observations	S&B 14.4, 15.7 (pages 503-505 only);	
2010-Apr-15	Thursday	8 1249 Eng. Hall.	Receiver position from Code Observations	S&B 14.4, 15.7 (pages 503-505 only);	PS 2 due.
2010-Apr-20	Tuesday	9 1249 Eng. Hall.	Precise point positioning for stationary receiver.	Leick 7.5 and http://apps.gdgps.net	
2010-Apr-22	Thursday	10 1249 Eng. Hall.	Precise point positioning for moving receiver	Leick 7.5 and http://apps.gdgps.net	PS 3 due.
2010-Apr-27	Tuesday	11 1249 Eng. Hall.	Precise point positioning for moving receiver	Leick 7.5 and http://apps.gdgps.net	
2010-Apr-29	Thursday	12 1249 Eng. Hall.	Relative positioning from phase observations for stationary receiver.	S&B 15.4; 15.5, Leick 7.7.7; http://www.ngs.noaa.gov/OPUS	Proposals for projects due.
2010-May-01	Saturday	1:00 pm to 5:00 pm 1249 Eng. Hall.	Field Exercise 2: Relative Positioning with three receivers	Users' guide for receivers	Bring appropriate clothing for working outside. Digital camera and a GPS receiver if possible. FE report due at 5:00 PM.
2010-May-04	Tuesday	13 1249 Eng. Hall.	Relative positioning from phase observations for stationary receiver.	S&B 15.4; 15.5, Leick 7.7.7; http://www.ngs.noaa.gov/OPUS	
2010-May-06	Thursday	14 1249 Eng. Hall.	Rapid Static Positioning	Leick 6.6.5, 6.6.6; http://www.ngs.noaa.gov/OPUS	
2010-May-11	Tuesday	6:00 PM to 9:00 PM 140 Weeks Hall	Student presentations of surveying project		Presentations in Power Point on CD-ROM. Students will grade each other. Written reports on paper also due.