Engr325 Instrumentation 11:00 MW Winter 2020

Text: Theory and Design of Mechanical Measurements
Richard S. Figliola, Donald E. Beasley, 6th Edition, Wiley, 2015
Note: Schedule subject to change with appropriate notice.

Date		Topic	Reading	HW Due
		LAB: No Lab This Week		
M	Jan 6	Course Introduction; Circuits Review	Notes	
W	8	AC Signals; Measurement Characteristics	Notes	
		LAB1: Waveform Measurement and Instrument Loading (2:30)		
M	13	Measurement Characteristics (10:45)	Notes	HW #1
W	15	Number Systems; Data Acquisition (10:45)	Ch 1.4,7,Notes	
		LAB2: Calibration		
Tu	**21**	Digital Sampling	Ch 7.2-7	HW #2
W	22	Data Integrity; Fourier Series	7.8,2.4,Notes	
		LAB3: Data Acquisition		
M	27	Fourier Series and the Fourier Transform	Ch 2.4-5	HW #3
W	29	Fast Fourier Transform and Matlab	Ch 2.4-5	
		LAB4: Signal Processing Using Fourier Transforms		
M	Feb 3	Digital and Analog Filtering	6.8	HW #4
W	5	Field Trip		HW #5
		LAB5: Mobile Sensor Analysis		
M	10	Sensor Overview; Test Review	Notes	HW #6
W	**12**	**Midterm Exam**		
		No Lab This Week		
M	**17**	**No Class – Snow Frolic**		
W	19	Acceleration and Accelerometers	Ch 12	
		LAB6: Accelerometers and Vibration Analysis		
M	24	Strain and Strain Gauges	Ch 11	
W	26	Motion Analysis Methods	Notes	
		LAB7: Motion Analysis Methods		
M	Mar 2	Student Presentations		
W	4	Student Presentations		
		LAB8: Force/Strain Measurement		
M	9	Student Presentations		
W	11	Student Presentations; Course Evaluation; Final Exam Review		HW #7
Tu	**17**	**Comprehensive Final Exam (10am - Noon)**		