



### Calendar

Class	Day	Date	Topic	Due
1-1	M	3/7	First order circuits	
1-2	T	3/8	Solving First Order Differential Equations	
1-3	R	3/10	Solving First Order Differential Equations	Hwk1, Quiz1
1-L	T/R		<i>Lab 1 – Concept Inventory, First Order Circuits (MATLAB/Simulink/MultiSim)</i>	
2-1	M	3/14	Second Order Circuits	
2-2	T	3/15	Solving Second Order Differential Equations	
2-3	R	3/17	Response of Underdamped Systems	Hwk2, Quiz2
2-L	T/R		<i>Lab 2 – First/Second order circuits (Introduction to NI myDAQ)</i>	
<b>FIRST BOILERMAKER REGIONAL, Purdue (3/17/11 - 3/19/11)</b>				
3-1	M	3/21	System Properties: Linearity, Time-Invariance, Causality, Memoryless	
3-2	T	3/22	System Properties: Invertible Systems, BIBO stability, LTI Systems	Hwk3
3-3	R	3/24	<b>Midterm 1</b>	
<b>NSBE NATIONAL CONVENTION, St. Louis, MO (3/23/11 - 3/26/11)</b>				
3-L	T/R		<i>Lab 3 – Time domain Modeling of a 1DOF Mechanical System</i>	
4-1	M	3/28	Impulse and Step Functions	
4-2	T	3/29	Impulse and Step Response of a System	
4-3	R	3/31	Convolution Examples	Hwk4, Quiz4
4-L	T/R		<i>Lab 4 – System Linearity and a Common Emitter Amplifier</i>	
5-1	M	4/4	Convolution and BISO stability and causality	
5-2	T	4/5	Convolution Examples	
5-3	R	4/7	Interconnected Systems	Hwk5, Quiz5
5-L	T/R		<b>Lab 5 – Lab Practical</b>	
6-1	M	4/11	Laplace Transform of Circuit Elements	
6-2	T	4/12	Transfer functions, Poles and Zeros	Hwk6
6-3	R	4/14	<b>Midterm 2</b>	
6-L	T/R		<i>Lab 6 – Transfer Functions and Optical Transmitter and Receiver</i>	
<b>SPRING BREAK (4/16/11 – 4/24/11)</b>				
7-1	M	4/25	Partial Fraction Expansion and Impulse Response	
7-2	T	4/26	Partial Fractions	
7-3	R	4/28	Characteristic Modes, Asymptotic Stability, Initial/Final Value Theorems	Hwk7, Quiz7
7-L	T/R		<i>Lab 7 – Simulation of Feedback control systems in Matlab and Simulink</i>	
<b>FIRST CHAMPIONSHIP, ST. Louis, MO (4/28/11-4/30/11)</b>				
8-1	M	5/2	Block Diagrams, Feedback Systems	
8-2	T	5/3	Steady State Response of a Periodic Input	
8-3	R	5/5	Computing $H(j\omega_0)$ from a Pole-Zero plot	Hwk8, Quiz8
8-L	T/R		<i>Lab 8 – Implementation of Feedback control systems</i>	
9-1	M	5/9	Bode Plots	
9-2	T	5/10	Bode Plots	Hwk9
9-3	R	5/12	<b>Midterm 3</b>	
9-L	T/R		<i>Lab 9 – Experimental Construction of Bode Plots</i>	
10-1	M	5/16	Filters	
10-2	T	5/17	Filters	
10-3	R	5/19	Final Exam Review	Hwk10, Quiz10
10-L	T/R		<i>Lab 10 – Lowpass, Highpass and Bandpass Filters</i>	