	http://elec3004.com
Summary & Course Review	
ELEC 3004: Systems : Signals & Controls Dr. Surya Singh	
Lecture 24 (with material from many!)	
elec3004@itee.uq.edu.au <u>http://robotics.itee.uq.edu.au/~elec3004/</u> © 2016 School of Information Technology and Electrical Engineering at The University of Queensland	June 2, 2016

Wee	k Date	Lecture Title	
	29-Feb	Introduction	
1	3-Mar	Systems Overview	
2	7-Mar	Systems as Maps & Signals as Vectors	
2	10-Mar	Data Acquisition & Sampling	
2	14-Mar	Sampling Theory	
3	17-Mar	Antialiasing Filters	
4	21-Mar	Discrete System Analysis	
	24-Mar	Convolution Review	
	28-Mar	Holiday	
	31-Mar	Fraguancy Pachonea & Filter Analysis	
5	4-Apr	Elitore	
	11-Apr	Digital Filters	
6	14-Apr	Digital Filters	
	18-Apr	Digital Windows	
7	21-Apr	FFT	
0	25-Apr	Holiday	
8	28-Apr	Introduction to Feedback Control	
0	3-May	Holiday	
9	5-May	Feedback Control & Regulation	
10	9-May	Servoregulation/PID	
10	12-May	Introduction to (Digital) Control	
11	16-May	Digital Control Design & State-Space	
	19-May	Observability, Controllability & Stability of Digital Systems	
12	23-May	Digital Control Systems: Shaping the Dynamic Response & Estimation	
12	26-May	Applications in Industry	
	30-May	System Identification & Information Theory	
	2-Jun	Summary and Course Review	

Weel	Date	Lecture Title	
1	29-Feb	Introduction	
-	3-Mar	Systems Overview	
2	7-Mar	Systems as Maps & Signals as Vectors	
-	10-Mar	Data Acquisition & Sampling	
3	14-Mar	Sampling Theory	
	17-Mar	Antialiasing Filters	
4	21-Mar	Discrete System Analysis	
	24-Mar	Convolution Review	
	28-Mar	Holiday	
	31-Mar		
5	4-Apr	Frequency Response & Filter Analysis	
	7-Apr	Filters	
6	11-Apr	Digital Filters	
	14-Apr	Digital Filters	
7	18-Apr	Digital Windows	
	21-Api	FF1 Heliday	
8	23=Apr	Introduction to Feedback Control	
	20=Apr	Holiday	
9	5 May	Feedback Control & Pegulation	
	9-May	Servoregulation/PID	
10	12-May	Introduction to (Digital) Control	
	16-May	Digital Control Design & State-Space	
11	10 May	Observebility Controllebility & Stability of Digital Systems	
	22 May	Digital Control Systems: Shaping the Dynamic Pagnance & Estimation	
12	25=May	Applications in Industry	
	20-May	System Identification & Information Theory	
13	50-iviay	System identification & information Theory	
- 10	2-Jun	Summary and Course Review	











Review!

What is ... a **System**?

ELEC 3004: Systems

2 June 2016 - 10

















SECATS:
Let's look back at the topic list from Lecture 1
The course is has a huge mandate:
• It is really $3 \cdot \frac{1}{2}$ courses in one !
– Linear Systems
– Signal Processing
– Controls & Digital Controls
 ∴ It is b r o a d !! There is a logic to it They share the same mathematical nature (poles & zeros) The math is common to more than just circuits!
ELEC 3004: Systems 2 June 2016 - 18





"4" Is Average

• What is a 3?





















Iceberg to Titanic: Take Advantage of Information



ELEC 3004: Systems

- 30 Min/Day Talking on Phone
- 5.5 days/year of audio samples
- Track this (notably the pauses) over time to detect onset of dimentia
- 150 Photos/Month



<section-header><section-header><section-header><complex-block><complex-block>







Next Time						
 Pondering Deeperture 	eper ? ?					
W	Veek Date Lecture Title					
	29-FebIntroduction					
_	3-MarSystems Overview					
	2 10-MarData Acquisition & Sampling					
	2 14-MarSampling Theory					
	3 17-MarAntialiasing Filters					
	4 21-MarDiscrete System Analysis					
	24-Marconvolution Review					
	31-Mar Holiday					
	5 4-AprFrequency Response & Filter Analysis					
	7-AprFilters					
	6 11-Applight Filters					
	14-AprDigital Filters					
	7 21-AptFFT					
	8 25-Apr Holiday					
	28-AprIntroduction to Feedback Control					
	9 5-MayHoliday 5 MayEesdback Control & Pagulation					
	9-May Eccolary a Regulation					
	10 12-MayIntroduction to (Digital) Control					
	16-MayDigital Control Design & State-Space					
	11 19-MayObservability, Controllability & Stability of Digital Systems					
	12 23-May Digital Control Systems: Shaping the Dynamic Response & Estimation					
	26-MayApplications in Industry					
1	30-MaySystem Identification & Information Theory					
	2-Jun Summary and Course Review					
• We're at the E	End. It's (the) final!					
• Thank you fol	KS!					
ELEC 3004: Systems		2 June 2016 - 38				