Spring AY20 SY310 Course Syllabus (MTWF)

Week	Day	Date	Topic	Reading	HW
1	Mon	6-Jan-20	**No Class**	**(STALLINGS)**	
1	Tues	7-Jan-20	MONDAY SCHEDULE Course Introduction / Communication Systems Overview	Course Website Ch. 1.2 - 1.3	Problem Set #1
1	Wed	8-Jan-20	Signals in Time & Frequency	3.1	
1	Thur	9-Jan-20	**No Class**		
1	Fri	10-Jan-20	Fourier Analysis	Apx. A	
2	Mon	13-Jan-20	Fourier Analysis	Apx. A	
2	Tues	14-Jan-20	Lab 1: Part 1		
2	Wed	15-Jan-20	Bandwidth & Data Rate	3.1	Problem Set #2
2	Thur	16-Jan-20	**No Class**		
2	Fri	17-Jan-20	Tansmission Impairments: dB, Gain & Attenuation	Apx. 3A	
3	Mon	20-Jan-20	**MLK Day**		
3	Tues	21-Jan-20	Lab 1: Part 2		
3	Wed	22-Jan-20	Transmission Impairments: Attenuation, Delay, Noise, SNR	3.3	Problem Set #3
3	Thur	23-Jan-20	**No Class**		
3	Fri	24-Jan-20	Channel Capacity	3.4	
4	Mon	27-Jan-20	Transmission Media: Guided & Unguided	4.1 - 4.2	Problem Set #4
4	Tues	28-Jan-20	Lab 1: Part 3		
4	Wed	29-Jan-20	Propagation	4.3 - 4.4	EMS Worksheet
4	Thur	30-Jan-20	**No Class**		Free Space Loss Worksheet
4	Fri	31-Jan-20	Antennas	4.2	
5	Mon	3-Feb-20	Analog & Digital Data, Analog-to-Digital Conv.	3.2, 5.3	Problem Set #5
5	Tues	4-Feb-20	Signal Encoding: Digital Data, Digital Signals (Line Coding)	5.1	
5	Wed	5-Feb-20	Signal Encoding: Digital Data, Digital Signals (Shift Keying)	5.2	A/D Worksheet
5	Thur	6-Feb-20	**No Class**		Line Coding Worksheet
5	Fri	7-Feb-20	***CAPSTONE PROJECT INTRODUCTION***		
6	Mon	10-Feb-20	Signal Encoding: Digital Data, Digital Signals (Shift Keying)	5.2	
6	Tues	11-Feb-20	Lab 2: Part 1		
6	Wed	12-Feb-20	Lab 2: Part 2		Problem Set #6
6	Thur	13-Feb-20	**No Class**		
6	Fri	14-Feb-20	Electronic Warfare	**Handout**	
7	Mon	17-Feb-20	**President's Day**		
7	Tues	18-Feb-20	Lab 2: Part 3		
7	Wed	19-Feb-20	Error Detection	6.1-6.5	Problem Set #7
7	Thur	20-Feb-20	**No Class**		
7	Fri	21-Feb-20	Forward Error Correction	6.6. 16.2	
8	Mon	24-Feb-20	Lab 3: Part 1		
8	Tues	25-Feb-20	Lab 3: Part 2		
8	Wed	26-Feb-20	Multiplexing & Multiple Access	8.1 - 8.2, 8.6	Multiplexing & Multiple Access Worksheet
8	Thur	27-Feb-20	**No Class**		
8	Fri	28-Feb-20	TBD		
9	Mon	2-Mar-20	Review Day		
9	Tues	3-Mar-20	***MIDTERM EXAM***		

9	Wed	4-Mar-20	Instructor Discretion		**None**
9	Thur	5-Mar-20	**No Class**	**(TCP/IP GUIDE)**	
9	Fri	6-Mar-20	Wireless Wrap-Up & Intro to Network Section		
	Mon	9-Mar-20	**Spring Break**		
	Tues	10-Mar-20	**Spring Break**		
	Wed	11-Mar-20	**Spring Break**		**None**
	Thur	12-Mar-20	**Spring Break**		
	Fri	13-Mar-20	**Spring Break**		
10	Mon	16-Mar-20	Intro to Networking & Network Devices	pp. 5-59, 79-134 Handout	
10	Tues	17-Mar-20	Lab 4: Intro to WireShark & Wifi (802.11) Lab		
10	Wed	18-Mar-20	Data Link Layer - Intro & Ethernet (802.3)	103-105, 128-129, **Stallings Chp 12.1-12.2**	Problem Set #8
10	Thur	19-Mar-20	**No Class**		
10	Fri	20-Mar-20	Data Link Layer - Wireless (802.11)	**Stallings Chp. 13.1 - 13.6**	
11	Mon	23-Mar-20	Network Layer - Intro & Logical Addresses (IP Address)	105-106, 233-328	
11	Tues	24-Mar-20	Lab 5: Adress Resolution Protocol & IP Header		
11	Wed	25-Mar-20	Network Layer - Address Resolution Protocol (ARP)	201-231	Problem Set #9
11	Thur	26-Mar-20	**No Class**		
11	Fri	27-Mar-20	Network Layer - Routing I	351-362, 591-595, 625-676, Handout	
12	Mon	30-Mar-20	Network Layer - Routing II	Handout	
12	Tues	31-Mar-20	Lab 6: Man-In-The-Middle		
12	Wed	1-Apr-20	Network Layer - IPv4 & IPv6	329-349, 401-421	Problem Set #10
12	Thur	2-Apr-20	**No Class**		
12	Fri	3-Apr-20	Network Layer - NAT & ICMP	422-447, 505-574	
13	Mon	6-Apr-20	Transport Layer - Introduction	106-109	
13	Tues	7-Apr-20	Lab 7: ICMP (WireShark) & IP Frag (decode)		
13	Wed	8-Apr-20	Transport Layer - User Datagram Protocol (UDP)	687-718	Problem Set #11
13	Thur	9-Apr-20	**No Class**		
13	Fri	10-Apr-20	Transport Layer - Transmission Control Protocol (TCP)	719-807	
14	Mon	13-Apr-20	Application Layer - Introduction		
14	Tues	14-Apr-20	Lab 8: TCP		
14	Wed	15-Apr-20	Application Layer - BOOTP & DHCP	971-1051, **Stallings Chp 21.5**	Problem Set #12
14	Thur	16-Apr-20	**No Class**		
14	Fri	17-Apr-20	Application Layer - DNS	825-885, 927-948 **Stallings Chp 24.2**	
15	Mon	20-Apr-20	Application Layer - HTTP	1315-1371 **Stallings Chp 24.3**	
15	Tues	21-Apr-20	Lab 9: Traffic Analysis (Layer 5)		
15	Wed	22-Apr-20	Application Layer - Mail Protocols	1215-1281 **Stallings Chp 24.1**	**None**
15	Thur	23-Apr-20	**No Class**		
15	Fri	24-Apr-20	Networking Practical Exam		
16	Mon	27-Apr-20	Network Wrap - up & Course Review		

16	Tues	28-Apr-20	Instructor Discretion		**None**
16	Wed	29-Apr-20	**Review and Study Day (No Class)**		
16	Thur	30-Apr-20	Exam Day 1		
16	Fri	1-May-20	Exam Day 2		
16	Sat	2-May-20	Exam Day 3		
17	Mon	5-May-20	Exam Day 4		
17	Tues	6-May-20	Exam Day 5		
17	Wed	6-May-20	Exam Day 6		
17	Thur	7-May-20	Exam Day 7		