

Class Schedule: Summer 2019

OMS CS6250 Computer Networks

Instructor: Maria Konte, Ph.D.

Head TA: Matthew McKinzie



Week	Dates	Udacity Lesson	Reading	Projects	Tests	Notes
1	5/12-5/18	1 Introduction 2 Architecture and Principles	<ul style="list-style-type: none"> How To Read a Paper (Optional) Design Philosophy of DARPA Internet Protocols 	Project 1 - VM Setup, Topologies, Simulating Networks		5/13: first day of class Full Summer 5/17: end of Summer registration 5/20: tuition payment deadline
2	5/19-5/25	3 Switching 4 Routing	<ul style="list-style-type: none"> End to End Arguments in System Design BGP Routing Policies in ISP Networks 	Project 1 due 5/25 Project 2 - Spanning Tree Protocol		
3	5/26-6/01	5 Naming, Addressing, Forwarding 5.1 Router Design Basics 5.2 DNS	<ul style="list-style-type: none"> Are we there yet? 20 years of IPV6 (Optional) 	Project 2 due 6/01	Test 1 Preparation Questions	
4	6/02-6/08			Discussion Thread 1 (extra credit)	Test 1 Test 1 window: 6/02 - 6/08	
5	6/09-6/15	6 Rate Limiting and Traffic Shaping	<ul style="list-style-type: none"> Sizing Router Buffers (Sections 1-4) Controlling Queue Delay 	Project 3 - Congestion Control and Buffer Bloat		

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6	6/16-6/22	7 Congestion Control and Streaming	<ul style="list-style-type: none"> ○ CUBIC Congestion Control (Sections 1-3, 5) ○ TCP Fast Open (Sections 1-4, 6-7) ○ Application Flow Control in YouTube Video Streams ○ MPTCP (Video) 	Project 3 due 6/22		
7	6/23-6/29	8 Content Distribution 9 Software Defined Networking	<ul style="list-style-type: none"> ○ Jellyfish (Skip sections: 4.2. LEGUP, 6.2-6.3) ○ Portland (Skip sections 3.7, 4) ○ The Road to SDN: An Intellectual History of Programmable Networks 	Project 4 - SDN Firewall		6/29: withdrawal deadline Full Summer
8	6/30-7/06	9.1 Programming SDNs 10 Traffic Engineering	<ul style="list-style-type: none"> ○ Modular SDN Programming with Pyretic 	Project 4 due 7/06 Discussion Thread 2 (extra credit)		7/04: official Georgia Tech holiday
9	7/07-7/13	11 Network Security	<ul style="list-style-type: none"> ○ BGP and Bulletproof Hosting Networks ○ How Secure are Secure Interdomain Routing Protocols 	Project 5 - BGP Hijacking Attacks with extra credit section		
10	7/14-7/20	11.1 Internet Worms 11.2 Spam 11.3 Denial of Service Attacks	<ul style="list-style-type: none"> ○ Hold-On: Protecting Against On-Path DNS Poisoning ○ Crossfire Attack 	Project 5 due 7/20 Discussion Thread 3 (extra credit)	Test 2 Preparation Questions	
11	7/21-7/27				Test 2 Test 2 window: 7/21 - 7/27	
12	7/28-8/03			CiOS		8/02: end of term 8/06: grades available