

		CMSC 234/334 Syllabus, 2/20/2017	Class and Lab	TuTh 1030-1150, Ry 276	Lab: Zar Room, Crerar	
	Date	Topic	Reading	In Class Activity	Assignment	Notes
Week 1	1/3/17	Course Overview, Objectives, Platforms (VR, F1/10th), Projects; Mobile != Desktop Computing			Lab #1 Out	Lab #1 Covers - simple Unity, tools, interface, accelerometer
	1/5/17	Graphics and Virtual Reality	Pollefeys, "Urban 3D reconstruction"			
					Lab #1 Due, 1/6-7/17	
Week 2	1/10/17	Augmented Reality: Depth-based 3D reconstruction in real-time Kinect Fusion + HoloLens	KinectFusion Siggraph 2011		Lab #2 Out	Lab #2: covers Unity GearVR, Assets, Networked, Multi-party Applications
	1/12/17	Project Structure; Project Thinking - emulate, riff, radical new; Past projects.Top venues.		Types of Projects, Project thinking, Team formation		
					Project Assignment (multi-part) out	
Week 3	1/17/17	Self-Driving Cars, DARPA Grand Challenge			Lab 2 Due, Lab #3 out	Lab #3: ROS, Streams, Basic car Control
	1/19/17	Depth Sensing and Simultaneous Localization and Mapping	DARPA grand challenge			
					Lab 3 due, 1/23-24/17	
Week 4	1/24/17	Ubicomp, Human Computer Interaction Basics, User-experience Design	Weiser "Computer for the 21st Century";		Project Team + Platform + Idea Due, 1/24/16; Lab 4 out	Lab #4: sensor data capture, processing, collision avoidance, SLAM (model building)
	1/26/17	Internet of Things, CES, Mobile World Congress				
Week 5	1/31/17	Class Cancelled	Work on project ideas / pitches		Lab 4 Due, 1/31/17; Project Pitch	4-slide oppty, scenario, how possible
	2/2/17	Project Discussions	Work on project ideas / pitches		Project Pitch	
Week 6	2/7/17	Project Ideas "5-minute Pitch"				
	2/9/17	Project Ideas "5-minute Pitch"				
	2/10/17				Project Plan Due	Detailed timeline, key obstacles, demo functionality at "check-in"; survey of related literature
Week 7	2/14/17	Socially-Aware Mobile Phones	Pentland, "Vibefones"		Quiz #1	Quiz #1 covers 3d capture, graphics, VR, basics of mobile computing
	2/16/17	Accelerometer-based Activity Inference	Intille, "Activity Recognition"			
Week 8	2/21/17	Privacy Regulation, Best Practices	Langheinrich, "Privacy by Design... Ubicomp"		Review status and course correction	
	2/23/17	Privacy in Mobile Computing (current)	Jana, "Enabling Fine-grained Permissions for Augmented Reality"			
Week 9	2/28/17	Class Cancelled				
	3/2/17	Privacy in Augmented Reality and Virtual Reality				

Week 10	3/7/17	Quiz 2			Quiz #2	Quiz #2 covers ubicomp, social phones, activity recognition, privacy
Finals Week	3/14/17 (tentative)	Project Presentations, 10am-4pm, Location tbd				
Final Poster, Slides, Retrospective	3/18/17	Final Project Materials Turnin	Turn in ppt and pdf for poster, and 2-3 page retrospective writeup			