

Class Schedule for CWR4103:

Topic		Reading Pages	Homework Number	# of Lectures
Hydrological Cycle, Hydrological Budget for Watersheds and Water Bodies		1-10		2
Precipitation	Mechanisms of precipitation, Measurement of Rainfall, Rainfall Hyetograph, Intensity Duration Frequency Curves, Estimation of Point and Areal Precipitation		1	4
Infiltration and Soil Moisture	Simple Methods to Estimate Infiltration: Phi index method, Green and Ampt, and Horton's model. Soil Moisture Redistribution and Field Capacity	42-59	2	2
Evaporation and Transpiration	Pan evaporation, Potential Evaporation, Energy and Water Budget Methods.	30-41		2
Streamflow	Measuring Stream Flow (Field Trip planned in the future) Separation of Direct Runoff and Base Flow in Stream	63-67 ; 59-61	3	3
Test 1				1
Hydrograph Analysis	Unit Hydrograph Theory, Estimation of Hydrograph Ordinates, Convolution Formula		4	4
Synthetic Hydrographs	Soil Conservation Curve Number Method; Rational Method for drainage in Urbanized Areas	120-134, 137-145	5	3
Flood Routing	Muskingum Method Storage Indication Method	239-265	6, and 7	2
Test 2				1

Introduction to Urban Hydrology	Design of detention ponds		8	2
Frequency Analysis	Histograms; Risk and Realibility in Water Resources Design; Moments of Frequency Distributions; Application of Frequency Distribution Functions to the Estimation of Extreme Events (Normal, Lognormal, Gamma, and Log Pearson distributions will be covered)	521-539	9	4
				30
FINAL EXAM				