Date	Topic	Assgnmts (Due F@11:59p PT)
W 01/17 F 01/19	Introduction and Course Organization Motivation for energy systems & control	Quiz (in-class) Survey
M 01/22 W 01/24 F 01/26	Mathematical modeling System theoretic framework State-space and linear systems	 Project/Team Declaration
M 01/29 W 01/31 F 02/02	Stability Energy storage technologies Energy storage technologies#	 HW 1
M 02/05 W 02/07 F 02/09	State Estimation Problems in Energy Systems Open-loop Observers, Observability Observability & Luenberger Observer	 Project Proposal
M 02/12 W 02/14 F 02/16	Luenberger Observer & Kalman Filter (KF) KF & Extended Kalman Filter Case Study: Battery SOC Est	 HW 2
M 02/19 W 02/21 F 02/23	PRESIDENTS DAY Optimization: Objective Fcns & Constraints Convex fcns & Sets, Minimizers⋆	
M 02/26 W 02/28 F 03/02	Convex Programming (CP) Linear Programming (LP) | Midterm Review IN-CLASS MIDTERM	
M 03/05 W 03/07 F 03/09	Quadratic Programming (QP) Second Order Cone Programming (SOCP) Sequential QP, KKT Conditions	
M 03/12 W 03/14 F 03/16	KKT Conditions & Duality Theory Case Studies: Microgrids & DER Aggregations Intro to ML: Regression & Classification	 HW 3
M 03/19 W 03/21 F 03/23	Regression Models: Linear, Neural Nets# Least Squares (Ordinary & Nonlinear)# Online Machine Learning	Progress Report
	SPRING RECESS	
M 04/02 W 04/04 F 04/06	Intro to Optimal Control Case Study: HEV Energy Mgmt via LP Case Study: PEV Chg Sched via QP	 HW 4
M 04/09 W 04/11 F 04/13	Dynamic Programming Case Study: Smart Appliance Scheduling Case Study: Optimal Resource & Allocation	 HW 5
M 04/16 W 04/18 F 04/20	Model Predictive Control (MPC) Markov Chains Stochastic Dynamic Programming (SDP)	
M 04/23 W 04/25 F 04/27	In-class Presentations & Critiques - I In-class Presentations & Critiques - II In-class Presentations & Critiques - III	
F 05/04	[RRR Week]	Final Report | Self/Team Eval

Moura on travel | ⋆ BERC Energy Summit