

ME 599 Lithium Battery Engineering and Life Management (LiBELM)

battery electric transition

	date	day	Sections		Issue	Due
1	28-Aug	Mon	Operation	Life Cycle Assessment for Battery Electric Vehicle	Econ, Env	
2	30-Aug	Wed	Operation	Intro, Chemistry/Material,	Eng	HW1 cell specs & sim
	4-Sep	Mon	Operation	Operation,		
3	6-Sep	Wed	Operation	Fitting OCV	Eng, Equity	HW2- OCV fitting HW1
4	11-Sep	Mon	Design	Circuit Models	Eng, Econ	
5	13-Sep	Wed	Design	Pack system (parallel/series) - Power/Range	Eng, Econ	HW3 - pack Range sizing HW2
6	18-Sep	Mon	Design	Sizing Other apps (solar&home, drone, drill)	Eng, Equity	
7	20-Sep	Wed	Management	Cell to Cell variability & Cell Balancing	Eng	HW 4 -- Solar, Imbalance HW3
8	25-Sep	Mon	Management	Cap & Res Calculation (SOH)	Eng, Env	
9	27-Sep	Wed	Management	Charging	Eng, Equity, Env	HW-5 - C,R Char & Charging HW 4
10	2-Oct	Mon	Manuf	Chemistry Geology/Mining, Cell Manufacturing	Eng, Econ	
11	4-Oct	Wed	Manuf	Fab Overview, Automation	Eng, Econ, Env	HW 6 Manuf CE HW-5
12	9-Oct	Mon	Rev	Rev	Eng, Equity	
	11-Oct	Wed	Exam	Exam	Eng, Econ	
	16-Oct	Mon		Fall Study Break		
13	18-Oct	Wed	Aging	Battery degradation factors, SEI, Calendar	Eng, Equity, Env	HW 7 - Degradation SEI HW6
14	23-Oct	Mon	Aging	Thermal Dynamics, Cooling, heating	Eng, Equity	
15	25-Oct	Wed	Aging	Thermal Dynamics, Cooling, heating		HW8 Thermal HW7
16	30-Oct	Mon	Aging	Preconditioning	Eng, Econ, Env, Equity	
17	1-Nov	Wed	Safety	Abnormal Thermal Behavior - Safety	Env, Equity	HW9 Health Est HW8
18	6-Nov	Mon	Circularity	Remaining Useful Life, Resale Value, 2nd Use	Eng, Econ	
19	8-Nov	Wed	Circularity	Recycling, Storage, Logistics	Eng, Econ, Env, Equity	HW9
20	13-Nov	Mon	Circularity	Review		
21	15-Nov	Wed	Exam	Exam 2		
23	20-Nov	Mon		Journal Club- Topics		Prof 2 Finalize Topic
24	22-Nov	Wed		Thx recess		
25	27-Nov	Mon		Journal Club - Prep		Propose Papers
26	29-Nov	Wed		Journal Club -Pitch Topic & Paper		5 min each
27	4-Dec	Mon		Journal Club - Read & Enter Comments		Morning Lecture Deadline
	6-Dec	Wed		Journal Club - Present		Morning & Afternoon
	8-Dec	Fri		Final Presentation&Script		
Exam	11-Dec	Mon		10:30-12:30		Oral Exam if neded