	ME 650 Computational Fracture Mechanics			Spring 2020	
Week	**Class**	**#**	**Topic**	**Key Dates for Paper**	**Assignments**
1	14-Jan	1	Introduction to course		
	16-Jan	2	Linear Elastic Fracture Mechanics (LEFM) - Basics		#1
2	21-Jan	3	LEFM with FEM		
	23-Jan	4	LEFM with FEM		
3	28-Jan	5	LEFM with FEM	Draft of Paper Title	
	30-Jan	6	J-Integral: Theory		#1 Due/ #2
4	4-Feb	7	J-Integral: Theory		
	6-Feb	8	Crack Growth in Elastic Solids		
5	1-Feb	9	Physical Theory of Fracture and CZM		
	13-Feb	10	The J-Integral: computations	Research Proposal Due	#2 Due/#3
6	18-Feb	11	Cohesive Zone Models (CZM)		
	20-Feb	12	Numerical Apects - CZM		
7	25-Feb	13	CZM Theory		
	27-Feb	14	CZM Stability		#3 Due/#4
8	3-Mar	15	CZM in ABAQUS/CAE		
	5-Mar	16	CZM Fatigue		
9	10-Mar	17	Nonlinear Fracture Mechanics		
	12-Mar	18	Nonlinear Fracture Mechanics		#4 Due/#5
10	17-Mar		Spring Break		
	19-Mar		Spring Break		
11	24-Mar	19	Nonlinear Fracture Mechanics		
	26-Mar	20	Nonlinear Fracture Mechanics		
12	31-Mar	21	**Exam 1**		
	2-Apr	22	Micromechanics of ductile failure		#5 Due/#6
13	7-Apr	23	Micromechanics of ductile failure		
	9-Apr	24	The Tensile Test		
14	14-Apr	25	Ductile Fracture		
	16-Apr	26	Ductile Fracture	Paper Draft Due	#6 Due/#7
15	21-Apr	27	Thin Walled Structures	Audio Slides Due	
	23-Apr	28	What is the status of fracture mechanics		
16	28-Apr	29	Dynamic Fracture		
	30-Apr	30	Dynamic Fracture	Final Paper Due	#7 Due
Finals Week	TBD		**Exam 2**		