Date	Topics	Meted Module	Reading
1/14	Definition of the Mesoscale	Definition of the Mesoscale How Mesoscale Models Work	M&D - Chapter 1
1/16	Mesoscale Modeling	Model Fundamentals How Models Produce Precipitation & Clouds*	Doswell Chapter 1 Doswell Chapter 2 (omit 2.4 and 2.5)
1/21	**MLK Holiday - No Classes**		
1/23	Fundamentals of Convection and Buoyancy	Principles of Convection I: Buoyancy and CAPE	Doswell Chapter 3.1 - 3.4
1/28	Tools of Mesoscale Analysis - Skew-T's	Skew-T Mastery	M&D Appendix A
1/30	Synoptic and Mesoscale Boundaries	Mesoscale Banded Precipitation	M&D Chapter 6 (omit 6.2 and 6.3.2) A Review of Cold Fronts and Prefrontal Troughs and Windshifts David M. Schultz - Monthly Weather Review
2/4	Mesoscale Events within Synoptic Scale Systems	Inverted Troughs and Their Associated Precipitation Regimes Inverted Troughs Case Exercise*	
2/6	Symmetric Instability and Slantwise Convection	Heavy Banded Snow Slantwise Convection: An Operational Approach Slantwise Convection Case Exercise	
2/11	Orographic and Thermally-Induced Flows	Thermally-forced Circulation I: Sea Breezes Thermally-forced Circulation II: Mountain/Valley Breezes	
2/13	Orographic and Thermally-Induced Flows/Fog	Flow Interaction with Topography Cold Air Damming	
2/18	**Mid-Term Exam**	Dynamically-Induced Fogs	
2/20	Fog and Fog Dissipation	Local Influences on Fog and Low Stratus Fog and Stratus Forecast Approaches Forecasting Radiation Fog	
2/25	Tools of Mesoscale Analysis - Hodographs	Principles of Convection II: Using Hodographs	M&D Chapter 2.6, 2.7
2/27	Tools of Mesoscale Analysis - Radar		M&D Appendix B
3/3	Boundary Layers and Low-Level Jets		M&D Chapter 3 (Omit 3.5.3)
3/5	Convective Initiation	Principles of Convection III: Shear and Convective Storms	Doswell Chapter 3.5 and 3.6 M&D Chapter 8 (Omit 8.1.1)

3/10	Thunderstorms - Environment	Predicting Supercell Motion Using Hodograph Techniques Mesoscale Convective Systems - Squall Lines and Bow Echoes Severe Convection II: Mesoscale Convective Systems	M&D Chapter 9 (Omit 9.5.5)
3/12	**In-Service Day - No Classes**		
3/17	Thunderstorms - MCS's	A Convective Storm Matrix: Buoyancy/Shear Dependencies An MCS Matrix	Doswell Chapter 9.1, 9.2 and 9.4 M&D Chapter 10 (omit 10.3, 10.6 and 10.7)
3/19	Convective Hazards - Tornadoes, Wind and Hail		Doswell Chapter 7 (omit 7.5 and 7.6) M&D Chapter 11.1 and 11.2 (omit 11.2.5 and 11.2.6)
3/24	**Spring Break - No Classes**		
3/26	**Spring Break - No Classes**		
3/31	Tornadoes		Doswell Chapter 5.1
4/2	Severe Weather Analysis and Forecasting		Doswell Chapter 11
TBD	**Final Exam**	* Indicates no quizzes for this module	