Wk/Le	Day	Date	Reading Before Class	Topics
1/1	M	Mar 7		Course preliminaries, applications of thermodynamics and fluid mechanics
1/2	T	Mar 8	5-4, ES 201 notes	Review: mass, linear momentum, energy, entropy, steady-state devices
1/3	R	Mar 10	3-1 to 3-4	Pure substance: state postulate of a simple compressible substance, *P-v-T* surface, phase change
2/4	M	Mar 14	3-5	Pure substance: quality in 2-phase region, property tables
2/5	T	Mar 15	Table A-4 to A-13	Pure substance: property table lookup, examples
2/6	R	Mar 17	3-6, 3-7, 3-9, 3-10, 7-7, 7-9	Ideal gas: compressibility chart, Δu, Δh & Δs when specific heats are not constant
3/7	M	Mar 21		Ideal gas: examples, applications
3/8	T	Mar 22		More examples and applications
3/9	R	Mar 24		**Exam 1** (Lessons 3-7)
4/10	M	Mar 28	7-4 to 7-6, 7-12	Isentropic processes, *T-s* diagrams, adiabatic efficiencies
4/11	T	Mar 29	8-5 to 8-7, 8-10, 8-11	Simple power cycles
4/12	R	Mar 31	8-14, 8-16 to 8-18	Simple refrigeration cycles
				Spring Break Apr 4 to Apr 8
5/13	M	Apr 11		More examples on thermodynamic cycles
5/14	T	Apr 12	2-8, 2-9	Hydrostatics: definition of a fluid, pressure and pressure gradient, manometers
5/15	R	Apr 14	11-1 to 11-3	Hydrostatics: pressure distributions on submerged surfaces, force and moment calculations of hydrostatic pressure distribution, centroid, center of pressure
6/16	M	Apr 18	11-4	Hydrostatics: Buoyance, Archimedes' Principle
6/17	T	Apr 19	12-1, ES 201 notes	Mechanical energy balance: key assumptions, applicability, losses
6/18	R	Apr 21	12-2, 12-3	Mechanical energy balance: relation between entropy production and losses, Bernoull's equation as an ideal scenario
7/19	M	Apr 25		**Exam 2** (Lessons 14-16)
7/20	T	Apr 26	12-4	Mechanical energy balance: various forms (energy, pressure, head), examples
7/21	R	Apr 28	10-5, 14-1 to 14-3	Internal flow: boundary layer development, entry length of a pipe
8/22	M	May 2	14-4, 14-5	Major loss: friction factor, Moody diagram, examples
8/23	T	May 3	14-6, 14-7	Minor loss: examples
8/24	R	May 5	15-1, 15-2	External flow: boundary layer development, skin friction drag on a flat plate, analysis based on conservation of linear momentum, concept of momentum deficit
9/25	M	May 9	15-5	Skin friction: laminar versus turbulent boundary layers, empirical determination of skin friction drag
9/26	T	May 10		**Exam 3** (Lessons 17-23)
9/27	R	May 11	15-3 to 15-4, 15-6	Pressure drag: slender versus blunt bodies, flow separation, pressure drag, empirical determination of total (skin friction + pressure) drag on various objects, examples
10/28	M	May 16	15-7	Lift: origin of lift, lift coefficients, stall, examples and applications
10/29	T	May 17		More examples on lift and drag
10/30	R	May 19		Course wrap up, evaluations