The COVERAGE of this course will be:

Lectures 1-3 --- full Chapter 18 of the text.

Lectures 4-5 --- full Chapter 19 of the text.

Lectures 6-7 --- back to Thermodynamics, in particular Maxwell's relations and their applications; see supplementary reference by Zemansky and Dittman, sixth edition (Carter doesn't have much on this topic!)

Lectures 8-9 --- Thermal behavior of magnetic materials; Sections 17.1-17.4 of the text, supplemented by Zemansky and Dittman, sixth edition.

[These nine lectures will constitute the subject-matter of the Mid-term test!]

Lectures 10-12 --- Phase Transitions in vapor-liquid systems, including critical exponents. Application to a van der Waals gas; Section 2.3 of the text, supplemented by Pathria, second edition.

Lecture 13 --- Mid-term Test

Lectures 14-15 --- Paramagnetic-Ferromagnet Phase Transition; Section 17.6 of the text, supplemented by Pathria, second edition.

Lectures 16-20 --- Transport Phenomena (Brownian motion, random walk-problem, Diffusion, viscosity and Thermal conductivity); Sections 11.6-11.9 of the text.