ME 211 Thermodynamics (2-1-0-6)

Thermodynamic systems; States, processes, Zeroth law; Properties of pure substances and steam, Mollier diagram; Heat and work transfer, First law and its applications to closed and open systems; Second law, Carnot cycle, entropy, corollaries of the second law; irreversibility and exergy analysis; Thermodynamic property relations; Properties of mixtures of ideal gases; and characteristic constants for mixture; Thermodynamic cycles: Air Standard cycles and vapour power cycles, refrigeration cycles.

Texts:

[1] Y. A. Cengel and M. A. Boles, Thermodynamics, An Engineering Approach, Tata McGraw Hill, 2003
[2] R. E. Sonntag, C Borgnakke and G. J. Van Wylen, Fundamentals of Thermodynamics, John Wiley, 2003.
[3] M. J. Moran and H N Shapiro, Fundamentals of Engineering Thermodynamics, John Wiley, 1995

References:

[1] J. P. Howell and P. O. Buckius, Fundamentals of Engineering Thermodynamics, McGraw Hill, 1992.
[2] G. F. C. Rogers and Y. R. Mayhew, Engineering Thermodynamics Work and Heat Transfer, Pearson 2003.