ECE 309 M.M. Yovanovich

Temperature Scales and Conversions

There are four thermodynamic temperature scales: **Celsius, Fahrenheit, Kelvin, Rankine**. The Kelvin and Rankine temperature scales are absolute scales.

The relations and conversions between the scales are:

Kevin and Celsius

$$T(K) = t(^o C) + 273.15$$

Rankine and Fahrenheit

$$T(R) = t(^o F) + 459.67$$

Conversion from Kelvin to Rankine

$$T(R) = \frac{9}{5} T(K)$$

Boiling Point of Water

$$373.15\, K = 100.00\, ^o C = 671.67\, R = 212.00\, ^o F$$

Ice Point

$$273.15\, K = 0.00\, ^o C = 491.67\, R = 32.00\, ^o F$$