Modules in Mechanics of Materials
Unit Conversion Factors

Density	1 Mg/m^3	=	1	gm/cm^3
		=	62.42	lb/ft^3
		=	0.03613	lb/in^3
		=	102.0	N/m^3
Energy	1 J	=	0.2390	calorie
		=	9.45×10^{-4}	Btu
		=	10^7	erg
		=	0.7376	ft-lb
		=	6.250×10^{18}	ev
Force	1 N	=	10^5	d (dyne)
		=	0.2248	lbf
		=	0.1020	kg
		=	3.597	oz
		=	1.124×10^{-4}	ton (2000lb)
Length	1 m	=	39.37	in
		=	3.281	ft
		=	10^{10}	Å
Mass	1 kg	=	2.205	lb
		=	35.27	oz
		=	1.102×10^{-3}	ton (2000lb)
Power	1 W	=	1	J/s
		=	0.7378	ft-lb/s
		=	1.341×10^{-3}	hp
Stress	1 Pa	=	1	N/m^2
		=	10	d/cm^2
		=	1.449×10^{-4}	psi
		=	1.020×10^{-7}	kg/mm^2
Toughness	1 $MPa\sqrt{m}$	=	0.910	$ksi\sqrt{in}$

Physical constants:
Boltzman constant $k = 1.381 \times 10^{-23}$ J/K
Gas constant $R = 8.314$ J/mol-K
Avogadro constant $N_A = 6.022 \times 10^{23}$ /mol
Acceleration of gravity $g = 9.805$ m/s^2