Chemistry 142

Exam 1 Equation Sheet

$$\Delta S_{sys} = \frac{q_{rev}}{T}$$

$$S = k \ln W$$

$$\Delta G = \Delta H - T\Delta S$$

$$\Delta G = \Delta G° + RT \ln Q$$

$$\Delta G° = -RT \ln K$$

$$\Delta G = -nFE$$

$$E = E° - \frac{RT}{nF} \ln Q = E° - \frac{0.0592}{n} \log Q \quad \text{(at 25 ˚C)}$$

Constants:

R = 8.3145 J mol^{-1} K^{-1} = 0.08206 L atm mol^{-1} K^{-1}

F = 96485 C/mol