Required reading and revision topics
Chemistry 3332

The following topics should be revised immediately before the appropriate lectures. You should have been introduced to these subjects in your General Chemistry classes.

STOICHIOMETRY
Review Oxidation Numbers and Balancing Equations. (Appendix D in Harris) and units of measurement (Chapter 1 in Harris)
For example, the equation:

\[
\text{Na}_2\text{C}_2\text{O}_4 + \text{KMnO}_4 + \text{H}_2\text{SO}_4 \rightarrow \text{CO}_2 + \text{H}_2\text{O} + \text{MnSO}_4 + \text{Na}_2\text{SO}_4 + \text{K}_2\text{SO}_4
\]

is not balanced. You should be able to balance it.

You should be able to convert moles to grams, etc.

You should be familiar with methods of expressing the weight of an analyte in a matrix. For example:

1. 1. Percent. CaCO$_3$ in limestone. a. Rock weights 1.0657g b. Analysis reveals 0.3324 g of CaCO$_3$, ie 31.19% by weight CaCO$_3$ in the rock.
2. 2. Trace amounts. Parts per million, etc. (page 19 in Harris)

EQUILIBRIA
Review general concepts of Chemical Equilibrium in Chapter 6. You should have seen this material before in General Chemistry classes. I will cover only key concepts in lecture.

ELECTROCHEMICAL CELLS AND ELECTRODE POTENTIALS
Review Electrochemical cells and the Nernst equation, Chapter 14, as introduced to you in General Chemistry.