Midterm Hints! Economics 322 Fall 2014 Instructor: Robert J. McKeown

The midterm exam is scheduled for October 30th at 8:30am. The class has been separated into two rooms.

Students with a family name beginning in A-K write in Kinesiology 101.

Students with a family name beginning in L-Z write in Dupuis 215.

To be successful on the midterm, students should know the following:

1. Know how to derive an efficient portfolio by math for the cases:

(a)One riskless and one risky asset;(b)Two risky assets;(c) One riskless and many risky assets.

Illustrate in a diagram the cases above. Recall the cases where two risky assets are uncorrelated, perfectly positively, and perfectly negatively correlated.

(d) Explain how the argument generalizes to N risky assets; and to the case of N risky assets and a riskless asset.

2. Be able to derive the CAPM when there is a riskless asset. Use the Copeland and Weston derivation presented in class. Be able to interpret the meaning of the result. Be able to use the CAPM to value random cash flows. Know the assumptions behind APT, how to derive the APT model with numbers and be able to derive a riskless arbitrage opportunity.

3. Consider international diversification of assets. Be able to convert returns in one country (e.g. \$US) into random returns in the investor's currency (e.g. \$Can). Explain how the mean and variance of \$Can returns will have components of the \$US returns and the random exchange rate. Would you expect there to be gains from international diversification? What factors will lead to a home bias in investing (i.e. the investor will favour home country investments)?

4. Explain why one or multi-factor models are used in portfolio theory to simplify the computation of the covariance matrix. Give examples of factor models that have been used and explain why they make economic sense (read chapter 8 and 16). Would you expect factor models and the estimated betas to be stable over long periods of time? Why?