## ECO 305: Intermediate Macroeconomics Your Name: \_\_\_\_\_\_ In-class Exercise: Consumption / Saving Model

**Directions:** Work in groups of up to four people and answer the following questions. All papers will be collected, but only one member's paper will be randomly selected and graded and all members of the group will receive the same grade.

By signing below, you agree that the following work represents the efforts of everyone in the group, and you are willing to accept as your own grade for the group project the grade earned from this representation of your group's work.

Signature Group Member 1	Print Name	Date
Signature Group Member 2	Print Name	Date
Signature Group Member 3	Print Name	Date
Signature Group Member 4	Print Name	Date

- 1. Suppose the representative consumer is a saver; that is she/he saves a positive amount in the current period.
  - (a) Describe and illustrate the original utility optimization point for current consumption, future consumption, and saving. Demonstrate with your graph and explanation that the consumer is in fact saving in the current period.

(b) Redraw your answer from (a). Using this graph, describe and illustrate the impact an increase in interest rate has on current consumption, future consumption, and saving.

(c) Redraw your answer from (b). Using this graph, describe and illustrate the income and substitution effects on current consumption and future consumption.

For the questions below, consider the net present value government budget constraint, which is given by,

$$g+\frac{g'}{1+r}=t+\frac{t'}{1+r}$$

2. Suppose the Federal government plans to increase government spending in the current period, but is not going to change its plans for government spending in the future. Using the government budget constraint above, describe the impact this will have on consumer's budget constraints.

3. Suppose that there is an increase in government spending, but no change in future government saving. Describe and illustrate the effect of an increase in current government spending on current consumption, future consumption, and saving.

- 4. Suppose the government passes a law to increase government spending in the current period, but puts together a "Congressional Super Committee on Deficit Reduction" to balance the government budget constraint in the long-run without raising taxes. This did happen with the Budget Control Act of 2011 which also avoided a U.S. federal government default.
  - (a) Describe the impact on the government budget constraint. Describe the impact on the consumer's budget constraint.

(b) Describe and illustrate the effect on current consumption, future consumption, and saving.

5. Suppose the government cuts spending and cuts taxes. Describe and illustrate the effect on current consumption, future consumption, and saving.