This review sheet is intended to cover everything that could be on the exam; however, it is possible that I will have accidentally left something off. You are still responsible for everything in the chapters covered except anything that I explicitly say you are not responsible for. Therefore, if I left something off of this sheet, it can still be on the exam. There will be no multiple-choice questions. Most of the questions will be like the ones in the homework assignments, and possibly a few definition questions, but I am more likely to ask questions that make you use the definitions rather than recite them. I will probably ask one of the questions from the book at the end of the chapters.

The review session will be Sunday 5/5 at 7:30.

Section #1 will have their final on Monday 5/6 at 1:00. Section #2 will have their final on Tuesday 5/7 at 8:00. You can take the final with either section. **However, if you are changing sections, let me know the day before so I can have enough copies of the exam.**

I try to have the material be proportional to the amount of time spent on that topic. If you do not count parts of classes for going over homework assignments, or taking exams, etc., we had about 30 classes of material. Therefore, if we spent 3 classes on a topic, then it would be about 10% of the exam. There is one exception to this, Chapter 14. Because you have not been tested on that, it will have more than its share on the exam.

When I write the exam, I first write questions on topics I have not covered but wanted to cover. Obviously, Chapter 14 is in that category. (There are generally few questions in this category except for material after the last exam.) Then I look for the most important topics. I write questions about them. Usually, that gives me an exam which is too long and I have to cut questions.

Chapter 14: What are **capital, investment,** and **saving**? How are they related? What is meant by a **positive rate of time preference**? Understand what determines the supply and demand for **loanable funds**? *The demand is the rate of return for the project. That rate of return is what we spent most of the chapter discussing. The supply of loanable funds demands upon how risky the loan is. In-other-words, what is the probability of default or not getting fully reimbursed*? Understand why the **nominal interest rate = pure interest + inflation premium + risk premium**. Be able to explain that by comparing the S/D diagram for two project, one risky and one not. I guarantee you there will be a **present value** problem on the test. *To figure out the present value of a stream of payments or to find out the rate of return, you start out the same. Make a table of every year and the payments for each year. Then convert all **future values** into present value using $PV=FV_n/(1+i)^n$. Here, i is the interest rate, n is the number of years in the future, FV_n is the value paid n years in the future, and PV is the present value. You will add together all of the payments after you convert them to PV. Note that you will eventually get one equation with either PV or i missing. (If the question says "You pay ... Find the rate of return" then you know PV and are looking for i. If the question says "You want x% return, how much will you pay.." then you know i and are looking for PV.) Then tell me what the missing number will tell you.* Understand that if the price of the **bond** is greater than the **face value**, then the **rate of return** is less than the **coupon rate**. The converse also holds as does the reverse inference for both that statement and the converse. To find the **implicit rate of return** for a building or education, you set the present value equal to zero and solve for i. *You will not actually solve the equation, you will just write "Solve for i."*

Non-graded Homework Assignment #11 is on the next page.

1) (25 points) Draw two supply/demand diagrams for loanable funds. Have the two bonds be identical except that one has a larger probability of default. Which one has a larger interest rate? Explain how you can tell that from your graph including why the two graphs look different.

2) (25 points) Suppose a bond has a coupon rate of 5%, a face value of $1000, a maturity in 3 years, and the interest is paid annually. Set up the equation which would determine how much you would be willing to pay if you were willing to settle for a 4% return. Briefly explain how you knew what went where in the equation. Without doing the calculation, would you pay more than $1000, $1000, or less than $1000. Explain your logic.

3) (25 points) Suppose a bond has a coupon rate of 8%, a face value of $2000, a maturity in 5 years, and the interest is paid annually. Set up the equation which would determine what rate of return you would get if you paid $1900 for the bond Briefly explain how you knew what went where in the equation. Without doing the calculation, would your return be more than 8%, 8%, or less than 8%. Explain your logic.

4) (25 points) Suppose you have two more years of college left. If you get a job now, you earn $40,000 per year for the rest of your life. If you go to school for the two more years and graduate, you will earn $55,000 per year for the rest of your life. Tuition and room & board costs $25,000 per year. If you leave college now, you will work for 47 years and if you finish college, you will work for 45 years. Set up the equation which can be used to find the internal rate of return. State how you know what numbers went where.