

Attendance: I encourage you to attend class and to be on time; I truly want you in my class. I will take attendance daily. If you are late, I will count you absent. If you are absent due to your illness or a family emergency, I will excuse you.

Quizzes: Each quiz will consist of one problem taken directly from your assigned homework with at most some numbers changed. I will give you the quiz during the first ten minutes of class. I will drop the lowest quiz score and average the remaining for your quiz grade.

Computer Assignments: Periodically I assign work for you to do on a spreadsheet, such as Excel or Lotus. Turn in your work by attaching your file to an email and emailing me your work at vyoung@bus.wisc.edu.

Grading: The lowest grade you can earn is given by the following scale:

93-100	A
88-93	AB
83-88	B
78-83	BC
70-78	C
60-70	D
0-60	F.

Course Schedule:

<u>Date</u>	<u>Material Covered</u>	<u>Homework</u>
W, 23 Jan	1.1-1.3	4, 7, 9, 10
F, 25 Jan	1.3	
M, 28 Jan	Quiz 1 (1.1-1.3); 1.4	13, 16-18
W, 30 Jan	1.5	20, 22, 23
F, 1 Feb	1.6	29, 33; 43, 44 on Excel – due W, 4 Feb, 11 am
M, 4 Feb	Quiz 2 (1.4-1.6); 2.1	4, 5, 7-9
W, 6 Feb	2.2-2.3	11, 13, 14, 17, 18
F, 8 Feb	3.1-3.2	5-9, 18, 21, 25, 26, 30
M, 11 Feb	Quiz 3 (2.1-3.1); 3.2	
W, 13 Feb	3.3	42, 44, 45
F, 15 Feb	3.4	47, 48, 50, 54
M, 18 Feb	Quiz 4 (3.2-3.4); 3.6	59, 61
W, 20 Feb	3.5	56
F, 22 Feb	4.1	1, 4, 7, 10, 15
M, 25 Feb	Quiz 5 (3.5-4.1); Review for Exam 1	
W, 27 Feb	Exam 1 (1.1-3.6)	
F, 1 Mar	4.2	18, 20, 23 on Excel – due M, 4 Mar, 11 am
M, 4 Mar	4.3-4.4	26, 27, 31-33, 36
W, 6 Mar	4.4-5.1	1, 3, 4, 7, 10, 11
F, 8 Mar	5.2	13
M, 11 Mar	Quiz 6 (4.3-5.2); 5.3-5.4	16, 17, 21, 24, 26-28, 30; 19 on Excel – due F, 15 Mar, 11 am
W, 13 Mar	6.2	2, 4, 6, 8, 9
F, 15 Mar	6.2	

<u>Date</u>	<u>Material Covered</u>	<u>Homework</u>
M, 18 Mar W, 20 Mar F, 22 Mar	Quiz 7 (5.3-6.2); 6.3 Review for Exam 2 Exam 2 (4.1-6.3)	10, 12, 15, 17, 18, 21
M, 1 Apr W, 3 Apr F, 5 Apr	no quiz; 7.2 7.2-7.3 7.3	1, 3, 5, 7, 8, 11 13-15, 19, 22
M, 8 Apr W, 10 Apr F, 12 Apr	Quiz 8 (7.2-7.3); 7.5 7.6 8.1	33 (also do for $l_x = 1000 e^{-0.05x}$) 41 (omit iii) 1, 4-6, 10-12, 15
M, 15 Apr W, 17 Apr F, 19 Apr	Quiz 9 (7.5-8.1); 8.3, 8.5 8.5 9.1	52-54 (ask me for ${}_t p_x$ and i) 1-5, 12, 13
M, 22 Apr W, 24 Apr F, 26 Apr	Quiz 10 (8.3-9.1); 9.1, 9.5 9.5, Review for Exam 3 Exam 3 (7.2-9.5)	21b-e, 22a, P , ${}_{10}V$ for 1-5 51b-c, 58, 60, 68b, 69, 70
M, 29 Apr W, 1 May F, 3 May	no quiz; 11.1 11.2 11.3	1, 7-9 (ask me for ${}_t p_x$ and i) 14, 19 27-29, 31, 35, 37
M, 6 May W, 8 May F, 10 May	Quiz 11 (11.1-11.3); Review for Final Review for Final Review for Final	
F, 17 May	Final exam – 12:25 – 2:25 p.m., Location TBA	

Name _____

Quiz 1: At a certain rate of simple interest, 1000 will accumulate to 1500 after a certain period of time. Find the accumulated value of 500 at a rate of simple interest three-fourths as great over three times as long a period.

Name _____

Quiz 2: Acme Trust offers three different savings accounts to an investor:

Account A: compound interest at 12% per year convertible monthly;

Account B: compound interest at 12.5% per year convertible twice a year;

Account C: compound discount at 12.2% per year convertible quarterly.

Which account is most advantageous to the investor? Which account is most advantageous to Acme Trust?

Name _____

Quiz 3: A man aged 40 wishes to accumulate a small pension by depositing 5000 at the beginning of each year for 20 years. Starting at age 65, he will make 20 annual withdrawals at the end of each year. Find the amount of each withdrawal if $i = 0.05$.

Name _____

Quiz 4: A fund of \$5000 is to be accumulated by n annual payments of \$100 followed by another n annual payments of \$200, plus a final payment, as small as possible, made one year after the last regular payment. If $i = 0.08$, find n and the amount of the final payment.

Name _____

Quiz 5: A loan of \$1000 is being repaid by annual installments of \$200, the first due in one year, and a smaller final payment made one year after the last regular payment. If $i = 0.08$, find the outstanding principal immediately after the 3rd payment.

Name _____

Quiz 6: Use the bond pricing formula $P = (Fr) a_{\overline{n}|i} + Cv^n$ to derive the formula

$$P = C + (Fr - Ci) a_{\overline{n}|i}.$$

Name _____

Quiz 7: A 20-year bond of \$1000 face amount with semiannual coupons, redeemable at par, is bought at a discount to yield 12% convertible semiannually. If the book value six months before the redemption date is \$980.00, find the total amount of discount in the original purchase price.

Name _____

Quiz 8: Starting with Makeham's formula $l_x = ks^x g^{c^x}$, verify that $\mu_x = A + Bc^x$, for suitable A and B .

Name _____

Quiz 9: Find the net single premium for a life annuity of \$1000 per year, with the first payment due in one year, sold to a 30-year-old if $l_x = 100 - x$ and $i = 0.08$.

Name _____

Quiz 10: Find the price of a whole life insurance policy with a face value of \$100,000 sold to a person aged 40 if the payment of 100,000 is to be made at the end of the 5-year period in which death occurs. $p_x = 0.06$ for all x , and $i = 0.08$.