ACC 311

- Welcome to Intermediate Financial Accounting II
- Professor Don Pagach

Administrative Issues

- Office - 3148 Nelson Hall
- Phone - 515-4447
- Office hours - 1:00 to 3:00 pm and by appointment
Administrative Issues

- Textbook - Intermediate Accounting, first edition
- Powerpoint slides are posted at:
  - www4.ncsu.edu/~acdon
- CPA Excel code - G8PG-CTXZ-BKF6

Administrative Issues

- Prereq for Acc 311 is a C- or better in ACC 310
- The class is lecture and problem based and requires that you come to class prepared to work problems
- The exams will mirror the problems done in class, you need to be able to do this work on your own
Administrative Issues

• Grading:
  • 3 exams during the semester (100 points each)
  • Non-cumulative final exam *** (100 points)
  • Two research cases - 25 points each
  • Numerous quizzes - 80 points total

• Help - see me asap or visit the Accounting lab in 1212 Nelson Hall

What are we covering?

• Chapter 11 - Investments
  • Main issue: fair value accounting

• Chapter 12 - Current Liabilities and Contingencies
  • Main issue: reporting and disclosure issues

• Chapter 13 - Bonds and LT Liabilities
  • Main Issue: understanding PV
What are we covering?

• Chapter 14 - Accounting for Leases
  • Main issue: Present value issues and new terminology

• Chapter 15 - Pensions and Post-retirement benefits
  • Main issue: reporting and disclosure issues

What are we covering?

• Chapter 16 - Accounting for Income Taxes
  • Main issue: Understanding timing differences between cash and accrual accounting, lotsof new terminology

• Chapter 17 - Stockholders’ Equity
  • Main issue: reporting and disclosure issues
What are we covering?

• Chapter 18 - Dilutive Securities and EPS
  • Main issue: Understanding how to handle dilutive securities in the financial statements and calculations

• Chapter 19 - Revisiting the Statement of Cash Flows
  • Main issue: Preparation of a cash flow statement

Time Value of Money

◆ Simple Interest
  Interest paid on only the original amount, or principal borrowed.

◆ Compound Interest
  Interest paid on any previous interest earned, as well as on the principal borrowed.
Simple Interest: \[ SI = P_0(i)(n) \]

**Formula**
- \( SI \): Simple Interest
- \( P_0 \): Deposit today (\( t=0 \))
- \( i \): Interest Rate per Period
- \( n \): Number of Time Periods

**Simple Interest Example**

- Assume that you deposit $1,000 in an account earning 7% simple interest for 2 years. What is the accumulated interest at the end of the 2nd year?

\[ \begin{align*}
SI &= P_0(i)(n) \\
    &= $1,000(.07)(2) \\
    &= $140
\end{align*} \]
Compound Interest

- With Compounding, interest is earned on previous amounts of interest.
- Assume that you deposit $1,000 in an account earning 7% COMPOUND interest for 2 years. What is the accumulated interest at the end of the 2nd year?
- Formula:
  \[ \text{Principal} \times (1 + \text{interest})^n \] - Principal
- $144.90

Present Value

Present Value is the current value of a future amount of money, or a series of payments, evaluated at a given interest rate.

Future Value

Future Value is the value at some future time of a present amount of money, or a series of payments, evaluated at a given interest rate.
Assume that you need $1,000 in 2 years. Let’s examine the process to determine how much you need to deposit today at a discount rate of 7% compounded annually.

\[
PV_0 = \frac{FV_2}{(1+i)^2} = \frac{$1,000}{(1.07)^2} = \frac{$1,000}{1.1449} = $873.44
\]

Present Value of a Single Amount

\[
PV_0 = FV_2 / (1+i)^2 = $1,000 / (1.07)^2 = $873.44
\]
General Present Value formula:

\[ PV_0 = \frac{FV_1}{(1+i)^1} \]

\[ PV_0 = \frac{FV_2}{(1+i)^2} \]

General Present Value Formula:

\[ PV_0 = \frac{FV_n}{(1+i)^n} \]
Using Present Value Tables

\[ P_{V_2} = \$1,000 \left( PVIF_{7\%,2} \right) \]
\[ = \$1,000 \times .873 \]
\[ = \$873 \]

<table>
<thead>
<tr>
<th>Period</th>
<th>6%</th>
<th>7%</th>
<th>8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.943</td>
<td>.935</td>
<td>.926</td>
</tr>
<tr>
<td>2</td>
<td>.890</td>
<td>.873</td>
<td>.857</td>
</tr>
<tr>
<td>3</td>
<td>.840</td>
<td>.816</td>
<td>.794</td>
</tr>
<tr>
<td>4</td>
<td>.792</td>
<td>.763</td>
<td>.735</td>
</tr>
<tr>
<td>5</td>
<td>.747</td>
<td>.713</td>
<td>.681</td>
</tr>
</tbody>
</table>

Types of Annuities

- **An Annuity** represents a series of equal payments (or receipts) occurring over a specified number of equidistant periods.

  - **Ordinary Annuity**: Payments or receipts occur at the end of each period.
  
  - **Annuity Due**: Payments or receipts occur at the beginning of each period.
Examples of Annuities

- Student Loan Payments
- Car Loan Payments
- Insurance Premiums
- Mortgage Payments
- Retirement Savings

Parts of an Annuity

Today $100 \quad \text{Equal Cash Flows Each 1 Period Apart} \quad \text{(Ordinary Annuity)}$

End of Period 1

End of Period 2

End of Period 3
Parts of an Annuity

(Annuity Due) Beginning of Period 1
Beginning of Period 2
Beginning of Period 3

0 1 2 3
$100 $100 $100

Today Equal Cash Flows Each 1 Period Apart

Example of an Ordinary Annuity

Cash flows occur at the end of the period

0 1 2 3
7%

$934.58 $1,000 $1,000 $1,000

$873.44

$816.30

$2,624.32 = PVA_3

PVA = $1,000/(1.07) + $1,000/(1.07)^2 + $1,000/(1.07)^3
= $934.58 + $873.44 + $816.30
= $2,624.32
Valuation Using Tables

\[
PVOA_n = R \times (PVOA_{10\%, n})
\]

\[
PVOA_3 = $1,000 \times (PVOA_{7\%, 3})
\]

\[
= $1,000 \times (2.624) = 2,624
\]

<table>
<thead>
<tr>
<th>Period</th>
<th>6%</th>
<th>7%</th>
<th>8%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.943</td>
<td>0.935</td>
<td>0.926</td>
</tr>
<tr>
<td>2</td>
<td>1.833</td>
<td>1.808</td>
<td>1.783</td>
</tr>
<tr>
<td>3</td>
<td>2.673</td>
<td>2.624</td>
<td>2.577</td>
</tr>
<tr>
<td>4</td>
<td>3.465</td>
<td>3.387</td>
<td>3.312</td>
</tr>
<tr>
<td>5</td>
<td>4.212</td>
<td>4.100</td>
<td>3.993</td>
</tr>
</tbody>
</table>