# COMM 293

## FINAL REVIEW SESSION

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# Property, Plant and Equipment

1) **Tangible Asset:** physical substance
Examples – PPE

2) **Intangible Asset:** lacks physical substance
copyright, patent, trademarks, goodwill

Key concepts:
- Useful life: the economic life of an asset determined to allocate the benefit derived from the asset
- Salvage value: the remaining value at which the asset can be sold at the end of useful period
- Depreciation/Amortization: a reduction in the value of an asset with the passage of time (not a measure of decline in economic value)
- Accumulated depreciation: contra asset account
- Historical cost principle: the assets are recorded at acquisition cost initially

?

Important question: which type of costs are included in the acquisition cost?
The costs which make the asset functional to use. Examples – testing, installation, transportations, labour, material cost

# Property, Plant and Equipment

Net book value = Acquisition cost – Accumulated depreciation

Cost allocation processes:

1) Straight line method: Equipment

$$\text{Depreciation expense} = \frac{Depreciable\ cost\ - \text{Salvage value}}{Useful\ life}$$

2) Units of activity: Car, factory machinery

$$\text{Depreciable cost per unit} = \frac{Depreciable\ cost\ - \text{Salvage value}}{Total\ units\ of\ activity}$$

$$\text{Depreciation expense} = \text{Depreciable cost per unit x units of activity during the year}$$

3) Declining balance:

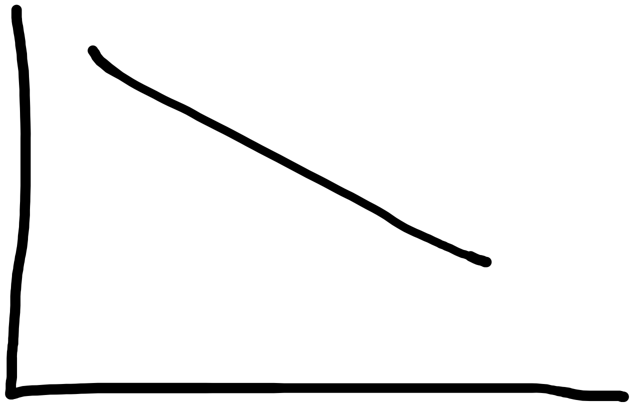
$$\text{Depreciation expense} = Beginning\ book\ value\ x\ \frac{1\ or\ 2}{\text{Useful}\ life}$$

Companies must make an election and continue with the election of the cost allocation process over the useful life.

# Property, Plant and Equipment

1) Straight line method: Equipment

$$\text{Depreciation expense} = \frac{Depreciable\ cost\ - \text{Salvage value}}{Useful\ life}$$



**PRACTICE:**

Company A purchases a machine. The purchase price of $120,000 included testing for $45,000, insurance of $5,000, installation fees of $50,000 and training cost of $20,000. The estimated salvage value of $20,000 and a useful life of 5 years.

A) What is the depreciable cost?
B) Calculate the depreciation expense for year 1.
C) Provide the journal entry for year 2.
D) What is the net book value at the end of year 3?

# Property, Plant and Equipment

2) Units of activity: Car, factory machinery

$$\text{Depreciable cost per unit} = \frac{\textit{Depreciable cost} - \text{Salvage value}}{\text{Total activity}}$$

$$\text{Depreciation expense} = \text{Depreciable cost per unit x units of activity during the year}$$

**PRACTICE:**

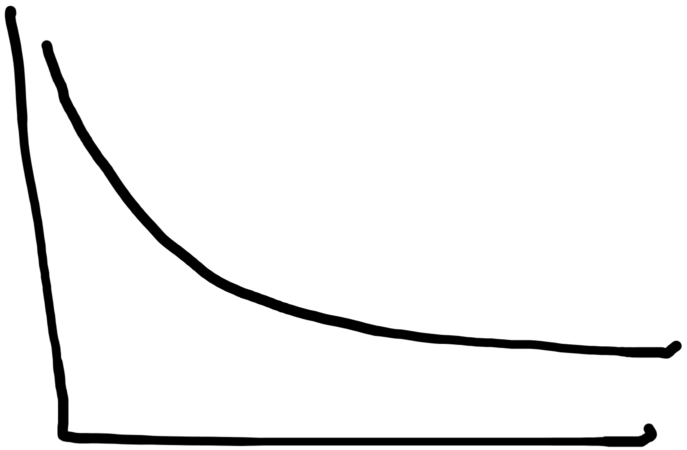
Company B uses truck for delivering flowers. The purchase price of the truck was $100,000. The estimated salvage value of $20,000. The capacity of the truck is 100,000 miles. In year 2, company B used 15,000 miles. In year 1, the depreciation expense was $10,000.

A) What is the depreciable cost per unit?
B) Calculate the depreciation expense for year 2.
C) Provide the journal entry for year 2.

# Property, Plant and Equipment

Declining balance: Computers/electronics

$$\text{Depreciation expense} = Beginning\ book\ value\ x\ \frac{1\ or\ 2\ (double\ declining)}{Useful\ life}$$



**PRACTICE:**

Company C uses a computer. The purchase price of the computer was $100,000. The useful life is 5 years. The estimated salvage value of $20,000. Use declining balance.

A) What is the depreciable expense in year 1?
B) What is the depreciable expense for year 2?
C) What is the depreciable expense in year 1 if it was double declining balance?
D) What is the net book value of the computer at the end of year 2 if it was double declining balance?

# Property, Plant and Equipment

**SUBSEQUENT MEASUREMENT:**
Impairment: this occurs when the carrying value or net book value/carrying value is less than the *recoverable amount*

Recoverable amount is the higher of
1) Fair value – selling costs OR
2) Value in use: PV of future cash flows from the use of the asset

**Derecognition:**
Derecognizing an asset means that it has been sold or damaged or retired at the end of useful life. In which case, any accounting gain/loss should be calculated.

| Transaction | Journal entry |
|---|---|
| Acquisition/Purchase of asset | Dr. Asset<br>Cr. Cash/AP |
| Expenditure | Dr. Repair/maintenance expense<br>Cr. Cash/AP |
| Impairment | Dr. Loss<br>Cr. Asset |
| Disposal (gain) – Proceeds > NBV | Dr. Cash<br>Dr. Accumulated depreciation<br>Cr. Gain on disposal<br>Cr. Asset |
| Disposal (loss) – Proceeds < NBV | Dr. Loss on asset<br>Dr. Accumulated depreciation<br>Dr. Cash<br>Cr. Asset |
| Retirement (no sale) | Dr. Accumulated depreciation<br>Cr. Asset |
| Retirement if salvage value is not received | Dr. Accumulated depreciation<br>Dr. Loss on disposal of asset<br>Cr. Asset |

# Property, Plant and Equipment

**PRACTICE:**

Company D sells its equipment for $20,000 in cash. The original price of the equipment was $50,000. As of January 2020, it has an accumulated depreciation of $40,000. Depreciation for the first 6 months is $5000.

A) Journal entry for recording depreciation expense.
B) Calculate gain/loss on disposal.
C) Provide journal entry to record the gain.

# Natural resources

Initial recognition:
Exploration and development

Subsequent measurement: Depletion (usually the use of units of activity method) of coal mine

Formula:
Unit depletion rate: (Total cost-residual value)/estimated total extractable units
Depletion cost: unit depletion rate x number of units extracted

Depletion cost is capitalized as inventory:
Dr. Inventory
 Cr. Accumulated depletion

# Research and development

| IFRS | GAAP |
|---|---|
| Research phase must be expensed | Research phase must be expense |
| Development phase CAN be capitalized | Development phase must be expensed |

**Intangibles**

Definite lives: patents, copyrights
Indefinite lives: goodwill, trademark, licenses, franchises

Goodwill (when there is an acquisition): Purchase price – fair value of net identifiable assets

# Liabilities

Current liabilities: obligations to a third party to be paid within a year
Example: Accounts Payable, overdrafts/loans

Initial:
Dr. Asset/expense
Cr. A/P

Subsequent:
Dr. A/P
Cr. Cash

Initial:
Dr. Cash
Cr. Note payable

Interest incurred:
Dr. interest expense
Cr. Interest payable

At maturity:
Dr. Note payable
Dr. Interest payable
Cr. Cash

Non-current liabilities: obligations to a third party to be paid after a year
Example: Bonds

Provision liabilities

Dr. Warranty expense
Cr. Provision for warranties

Once incurred:

Dr. Provision for warranties
Cr. Cash

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# Liabilities

Sales Tax:

Dr. Cash
  Cr. Sales revenue
  Cr. Sales tax payable

Payroll (Initial)

Dr. Salary expense
  Cr. Income tax payable
  Cr. CPP payable
  Cr. EI payable
  Cr. Salaries payable

Payroll (paid to employees)

Dr. Salaries payable
  Cr. Cash

Payroll (Initial)

Dr. Compensation expense
  Cr. CPP Payable
  Cr. EI payable

Payroll (paid to government)

Dr. CPP payable
Dr. EI payable
Dr. Income tax payable
  Cr. Cash

Unearned revenue
Dr. Cash
  Cr. Unearned revenue

Unearned revenue (when earned)
Dr. Unearned revenue
  Cr. Revenue

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# Liabilities

**PRACTICE:**

1) Fancy bank agrees to lend $100,000 to Company A on September 1, 2020. The terms of the loan are that that the interest rate will be 10% and the loan matures in 4 months. The note matures on January 1. Provide journal entries on:

A) September 1st
B) December 31st
C) Jan 1, 2021

2) Amazon sells 50 iphone 12 pro max September 2 costing $1600 each. However, the phones will reach the customers after 2 days as per 2 days shipping for amazon prime members. Provide journal entries for:

A) Initial sale
B) Once the phones have been delivered on September 4.

# Bonds

Why so much complication?
Timing difference between agreement and arrangement of contract. Bonds are traded on the stock market.

What is PV of principal + interest payments? = proceeds

Coupon rate < market rate = Discount bond in which case the price < face value

Coupon rate > market rate = Premium bond in which case the price > face value

Effective interest rate method
Interest payments (paid) = Face value * coupon rate
Interest expense = beginning carrying value * market rate

Amortization of discount increases carrying value
Amortization of premiums decreases carrying value

Journal entries (discount)

Issuance:
Dr. Cash
Dr. Discount on B/P
    Cr. Bonds payable

Interest:
Dr. Interest expense
    Cr. Interest payable
    Cr. Discount on B/P

Journal entries (premium)

Issuance:
Dr. Cash
    Cr. Premium on B/P
    Cr. Bonds payable

Interest:
Dr. Interest expense
Dr. Premium on B/P
    Cr. Bonds payable

Gain/Loss on bond:
Dr. Bonds payable
    Cr. Cash
    (Cr. Gain on bond redemption)
    (Dr. Loss on bond redemption)

# Bonds

PRACTICE:

A) DISCOUNT: Amazon issues a 3-year bonds with face value of $1,000,000 at the coupon rate of 6% semiannually on 1st Jan 2020. The market rate is 8%.

1) Initial journal entry
2) Record the interest expense on 1st January 2022
3) Record the interest expense on July 1st 2021.

B) PREMIUM: Amazon issues a 3-year bonds with face value of $1,000,000 at the coupon rate of 9% on 1st Jan 2020. The market rate is 7%.

1) Initial journal entry
2) Record the interest expense on 1st January 2021

Present value of all interest payments which will be received:

P = Interest payments (actually paid per coupon)

r = market rate

n = number of periods

$$P\left[\frac{1-(1+r)^{-n}}{r}\right]$$

# Shareholder's equity

Issuance of shares:
Dr. Cash
  Cr. Common shares

or could be
Dr. Asset/expense
  Cr. Common shares

Reacquisition of shares
When purchase price = average price
Dr. Common shares
  Cr. Cash

When purchase price < average price
Dr. Common shares
  Cr. Cash
  Cr. Contributed surplus

When purchase price > average price
Dr. Common shares
Dr. Contributed surplus
  Cr. Cash

Declaration of Cash dividends
Dr. Dividends declared
  Cr. Dividends payable

Declaration of stock dividends
Dr. Stock dividends (-SE)
  Cr. Common stock dividends payable (+SE)

Payment:
Dr. Dividends payable
  Cr. Cash

Dr. Common stock dividends payable
  Cr. Common shares

Important: When there is a loss, the loss should be deducted from contributed surplus until the account balance becomes 0. If there is excess loss, then it is deducted from the retained earnings.

# Shareholder's equity

PRACTICE: Patrick's spa declared and paid dividends of $2,000 on October 1st 2016.

| | 2016 | 2015 |
|---|---|---|
| Common shares ($) | 120,000 | 100,000 |
| RE ($) | 80,000 | 50,000 |
| Shareholder's equity ($) | 200,000 | 150,000 |

A) If Patrick's spa sold 20,000 shares on July 1st 2016, what is the average selling price of shares? Assume that that was the only transaction in the year.
B) Provide Journal entry for the sale of shares
C) What is the net income in 2018?

# Statement of cashflows

1) Operating activities: day to day operations (income statement)
Example of inflows: sales, interest received, dividends received
Example of outflows: Wages, taxes, interest paid, expenses

2) Investing activities: Investments and long-term assets
Example of inflows: sale of PPE, investments (debt and equity)
Example of outflows: purchase of PPE, loans

3) Financing activities: changes in shareholder's equity
Example of inflows: Sale of shares or issuance of bonds
Example of outflows: Dividends

Net income
+/- noncash items
+/- accounting gains/losses
+/- current assets and liabilities
Beg cash balance
+/- net cash from investing
+/- net cash from financing
= ending cash balance

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# Statement of cashflows

PRACTICE:
Following information is available on Gucci. In which category of three activities does the transaction belong in and would we add/remove the amounts below if we undertake the indirect method of cashflows:
1) Gucci’s depreciation expense is $30,000
2) The company sold a production equipment at the book value of $20,000. The cost was $50,000 and accumulated depreciation was 30,000. Proceeds of $8,000 was received.
3) Prepaid expenses of $5,000 was paid to the supplier.
4) Gucci purchased land in downtown to sell their overpriced fancy goods for $500,000
5) Gucci issued $10,000 worth of common shares
6) There was a payment of $100,000 in dividends
7) The accounts receivable in 2019 was $100,000 and the accounts receivable in 2020 is $50,000.
8) Income taxes payable in 2019 was $20,000 and in 2020, it was $5,000.

# Financial statement analysis

| Name | Category |
|---|---|
| Return on equity | |
| Return on asset | |
| Profit margin | |
| Payout ratio | |
| Current ratio | |
| Quick ratio | |
| A/R turnover | |

| Name | Category |
|---|---|
| Average collection period | |
| Inventory turnover | |
| Days in inventory | |
| Times interest earned | |
| Debt to equity ratio | |

**Practice: which ones are profitability, solvency and liquidity formulas?**

# Financial statement analysis

| Name | Meaning | Formula |
|---|---|---|
| Return on equity | | |
| Return on asset | | |
| Profit margin | | |
| Payout ratio | | |
| Current ratio | | |
| Quick ratio | | |
| A/R turnover | | |

| Name | Meaning | Formula |
|---|---|---|
| Average collection period | | |
| Inventory turnover | | |
| Days in inventory | | |
| Times interest earned | | |
| Debt to equity ratio | | |

**Practice: Fill out the formulas and meaning of each ratio**