## Intro to Managerial Accounting



## Process Cost System

| Direct Material Cost per Equivalent Unit | $=$ Total Direct Material Cost for the Period | ' |
| :---: | :---: | :---: |
|  | Total Equivalent Units of Direct Materials |  |
| Conversion Cost per Equivalent Unit | Total Conversion Costs for the Period |  |
|  | Total Equivalent Units of Conversion Costs |  |
| Yield $=$ Quantity of Material Output | / Quantity of Material Input |  |

## Activity-Based Costing

Single Plant-wide Factory Overhead Rate $=$ Total Budgeted Factory Overhead /
Total Budgeted Plant-wide Allocation Base
Department Factory Overhead Rate $=$ Budgeted Department Factory Overhead / Budgeted Department Allocation Base

| Ratio of Allocation Base Usage in a Department | $=$ Department Allocation Base Usage for Product X |
| ---: | :--- |
|  |  |
|  | Department Allocation Base Usage for Product Y |

Activity Rate $=$ Budgeted Activity Cost $/$ Total Activity Base Usage

## Cost-Volume-Profit Analysis



## Variable Costing for Management Analysis

| Manufacturing Margin $=$ Sales - Variable Cost of Goods Sold |
| :--- |
| Contributing Margin $=$ Manufacturing Margin - Variable Selling and Administrative Expenses |
| Income from Operations $=$ Contribution Margin - Fixed Costs |
| Contribution Margin Ratio $=$ Contribution Margin $/$ Sales |

## Budgeting

Budgeting Revenue $=$ Expected Sales Volume $\times$ Expected Unit Sales Price
Total Units to be Produced $=$ Expected Units to be Sold + Desired Units in Ending Inventory

- Estimated Units in Beginning Inventory

Budgeted Direct Material Required for Production $=$ Budgeted Production Volume $\times$
Direct Material Quantity Expected per Unit
Direct Material Quantity to be Purchased
$=$

| Material Required for Production |
| :--- |
| Desired Ending Materials Inventory |
|  |
| - | Estimated Beginning Materials Inventory


| Budgeted Direct Material to be Purchased $=$ | Direct Material Quantity to be Purchased $\times$ |
| ---: | :--- |
| Unit Price |  |


| Budgeted Direct Labor Hours Required for Production $=$ | Budgeted Production Volume $\times$ |
| :--- | :--- |
| Direct Labor Hours Expected per Unit |  |



| Factory Overhead Rate $=$ | Budgeted Factory Overhead at Normal Capacity / |
| ---: | :--- |
|  | Normal Productive Capacity |



| Fixed Factory Overhead Rate $=$ | Budgeted Fixed Overhead at Normal Capacity / |
| ---: | :--- |
| Normal Productive Capacity |  |


| Variable Factory Overhead Controllable Variance $=$ | Actual Variable Factory Overhead |
| ---: | :--- |
| Budgeted Variable Factory Overhead |  |


| Budgeted Variable Factory Overhead $=$ | Standard Hours for Actual Units Produced $\times$ |
| ---: | :--- |
| Variable Factory Overhead Rate |  |

Fixed Fatory Overhead Volume Variance =
(Standard Hours for 100\% of Normal Capacity - Standard Hours for Actual Units Produced) $\times$
Fixed Factory Overhead Rate

| Applied Factory Overhead $=$ | Standard Hours for Actual Units Produced $\times$ |
| ---: | :--- |
|  | Total Factory Overhead Rate |

Total Factory Overhead Cost Variance $=$ Actual Factory Overhead - Applied Factory Overhead
Direct Labor Time Variance $=$ (Actual Staff Hours - Standard Staff Hours) $\times$ Standard Rate per Hour

## Evaluating Decentralized Operations

Service Department Charge Rate $=$ Service Department Expense /


## Differential Analysis \& Product Pricing

| Differential Revenue $=$ Revenue (Alt. 2) - Revenue (Alt. 1) |
| :--- |
| Differential Costs $=$ Costs (Alt. 2) - Costs (Alt. 1) |
| Differential Income (loss) $=$ Income (Alt. 2) - Income (Alt. 1) |
| Normal Selling Price $=$ Cost Amount per Unit + Market per Unit |
| Product Cost per Unit $=$ Total Product Cost $/$ Estimated Units Produced \& Sold |
| Markup Percentage $=$ (Desired Profit + Total Selling \& Administrative Expenses) / |
| Total Product Cost |
| Tarect Profit $=$ Desired Rate of Return $\times$ Total Assets |
| Unit Contribution Margin per Production Bottleneck Hour $=$ Unit Contribution Margin / |

## Capital Investment Analysis

| Average Rate of Return $=$ Estimated Average Annual Income / Average Investment |
| :--- |
| Average Investment $=$ (Initial Cost + Residual Value) / 2 |
| Cash Payback Period $=$ Initial Cost / Annual Net Cash Inflow |
| Present Value Index $=$ Total Present Value of Net Cash Flow / Amount to be Invested |
| Present Value Factor for an Annuity of $\$ 1=$ Amount to be Invested / $=1$ |

## Lean Manufacturing \& Activity Analysis

| Value-Added Ratio $=$ Value - Added Lead Time $/$ Total Lead Time |
| :--- |
| Total Within-Batch Wait Time $=$ (Value - Added Time) $\times$ (Batch Size - 1) |
| Cell Conversion Cost Rate $=$ Budgeted Conversion Cost $/$ Planned Hours of Production |
| Conversion Cost for a Product $==$ Manufacturing Time $\times$ Cell Conversion Cost Rate |

