Activity based costing - a system that focuses on activities as the fundamental cost objects and uses the costs of these activities as a basis for compiling costs.

Steps in developing an activity based costing system:

1) Identify the activities
2) Estimate the total indirect costs of each activity
3) Identify the allocation base for each activity
4) Estimate the total quantity of each allocation base
5) Compute the cost allocation rate for each activity

\[
\text{Allocation rate} = \frac{\text{Est. Total Indirect costs of activity}}{\text{Est. Total quantity of cost allocation base}}
\]

6) Obtain the actual quantity of each allocation base used by the activity
7) Allocate the costs

\[
\text{Allocated activity costs} = \text{Cost allocation rate} \times \text{Actual quantity of cost allocation base used}
\]

Throughput Time - the time between receipt of raw materials and completion of finished products.

\[
\text{Throughput time} = \text{Processing Time} + \text{Waiting Time} + \text{Moving Time} + \text{Inspection Time} + \text{Recording Time}
\]

Just-In-Time Production - where companies buy materials and complete finished goods just in time for delivery to customers.

Just-In-Time Costing - a standard costing system that starts with output completed and then assigns manufacturing costs to units sold and to inventories.

Raw and In Process (RIP) Inventory - this is a combination of direct materials and work in process inventories.

Journal entry: RIP Inventory
Accounts Payable

Indirect Costs are collected in an account called “Conversion Costs” which is similar to the manufacturing overhead account.

Journal entry: Conversion Costs
various accounts (depends on actual expense incurred)
Journal entry to record standard cost of goods completed

<table>
<thead>
<tr>
<th>Finished Goods Inventory</th>
<th>Total costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIP Inventory</td>
<td>Units * Standard unit cost</td>
</tr>
<tr>
<td>Conversion Costs</td>
<td>Units * Standard unit cost</td>
</tr>
</tbody>
</table>

Journal entry to record Cost of Goods Sold

<table>
<thead>
<tr>
<th>Cost of Goods Sold</th>
<th>Total cost of units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finished Goods Inventory</td>
<td>Total cost of units</td>
</tr>
</tbody>
</table>

Under-allocated or Over-allocated conversion costs are written off to Cost of Goods Sold.

Life-Cycle Budget - a budget that predicts what a product’s revenues and costs will be over its entire life cycle.

Life Cycle Budget:

Sales Revenue $  
DM & purchased parts $__________  
Materials - contribution margin $  

Other cost direct to product:

Variable conversion costs:
- Indirect Materials $  
- Direct Labor $  
- Indirect Labor $  
- Utilities $__________ $__________  

Product contribution margin $  

Fixed conversion costs:
- Indirect Labor $  
- Depreciation $  
- Maintenance $__________ $__________  

Life-Cycle manufacturing contribution $  

Other Fixed Costs:
- Design and engineering $  
- Marketing $  
- Customer Service $__________ $__________  

Life-Cycle Operating contribution $
Target Costing - a cost management technique that helps set goals for cost savings through product design.

Value Engineering (VE) - designing products that achieve cost targets and meet specified quality and performance standards.

<table>
<thead>
<tr>
<th>Product Element</th>
<th>Budgeted Cost</th>
<th>- VE Cost Reduction</th>
<th>= Target Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Element B</td>
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<td>Element C</td>
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<td>Element D</td>
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<tr>
<td>Total</td>
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</tbody>
</table>