

ACCT 102 - Fundamentals Of Accounting II  
**Ch 17 – Activity Based Costing**

I. Assigning Overhead Costs

Overhead costs cannot be directly traced to a product or to particular units. The overhead costs are accumulated in an Overhead account then must be allocated to the products/units using a Predetermined Overhead Allocation Rate.

There are 3 ways to allocate Overhead to products:

1. Single Plantwide Overhead Allocation Rate

The single plantwide method uses the same allocation rate to apply overhead for all products and all departments.

$$\text{Plantwide rate} = \frac{\text{Total Budgeted OH}}{\text{Total Budgeted Allocation Base}}$$

2. Departmental Overhead Allocation Rate

Uses a different OH rate for each department. OH costs must first be computed for each department then allocated based on the allocation base for each department.

$$\text{Departmental OH rate} = \frac{\text{Total Budgeted Dept OH}}{\text{Total Departmental Budgeted Allocation Base}}$$

3. Activity Based Overhead Allocation Rate

Allocates OH based on the activities involved in the production process. OH costs must first be computed for each activity and an allocation base must be determined for each activity. The OH is applied differently to each activity.

$$\text{Activity Based OH rate} = \frac{\text{Total Budgeted Activity OH}}{\text{Total Activity Budgeted Allocation Base}}$$

Example:

Della Lishus owns and operates Della Lishus Cakes, Inc. Della Lishus Cakes makes specialty cakes for Weddings and Birthdays. Her business has 2 departments: The Baking Department and the Decorating Department. She allocates the overhead based on Direct Labor hours. Her budget indicates the following:

	<u>Total</u>	<u>Baking Dept.</u>	<u>Decorating Dept.</u>
Budget	\$50,400	\$36,000	\$14,400
DL hours	18,000	6,000	12,000
Mach hours	23,000	20,000	3,000

### 1. Single Plantwide Overhead Allocation Rate

Della would use the same OH Allocation rate for both departments.

### 2. Departmental Overhead Allocation Rate

Della would compute a separate OH allocation rate for each of the two departments and allocate the OH to the departments separately. She may choose to allocate OH to the Baking Department using Machine Hours and to the Decorating Dept. using Direct Labor Hours.

### 3. Activity Based Overhead Allocation Rate

Activity based costing accumulates overhead costs into activity cost pools and then uses activity rates to allocate those costs to products. This involves 4 steps: 1) identify activities and the costs they relate to; 2) group similar activities into activity cost pools; 3) determine an activity rate for each activity cost pool; 4) allocate overhead costs to products using those activity rates.

Della would need to identify the activities performed in each department and a different OH allocation rate would be applied to each different activity using different allocation rates.

The Baking Dept. has 4 activities: 1. Set ups; 2. Mixing; 3. Baking; 4. Cooling

The Decorating Dept. has 3 activities: 1. Set ups; 2. Mixing; 3. Application