ACCT 102 - Professor Johnson
Lecture Notes – Chapter 15:
JOB ORDER COST ACCOUNTING AND ANALYSIS

JOB ORDER COST ACCOUNTING

A *cost accounting system* records manufacturing activities using a perpetual inventory system. A perpetual inventory system continuously updates the accounting and production records for costs of materials, work in process, and finished goods inventories.

A properly designed cost accounting also gives management information about costs and inventory levels. This information is crucial in controlling costs and setting selling prices.

The two types of cost accounting systems we will study are *job order cost accounting* and *process cost accounting*. We will study job order cost accounting in Chapter 15 and process cost accounting in Chapter 16.

A job order cost accounting system is used when a company manufactures products customized to customer specifications. The production activities necessary to complete the customized product are called a job.

Companies producing customized products usually obtain work by soliciting bids from customers. The bid is a quoted price for the work. A job order cost system tracks the cost per job. It is important to accurately track the cost for each job so that management can determine whether the actual costs incurred were reasonably close to the estimated costs calculated when the bid was prepared. Significant cost overruns should prompt management to investigate the cause of the cost overruns and take corrective action.

Remember, accounting provides information to people. Managerial accounting provides information to top management. Here is how top management can use some of the information generated from a job order cost accounting system:

- Compare actual costs to estimated costs and investigate significant differences
- Use data from the job order system to assist in preparing future bids for work
- Track efficiency by job supervisor
- Track efficiency by worker

The actual production costs are tracked, per job, on a job cost sheet. Once completed, the job cost sheet is transferred from a job in process file to a finished goods file.

JOB ORDER COST FLOWS AND DOCUMENTS

A job order cost accounting system allocates costs to each job. The costs allocated are the three product costs we learned in Chapter 14: materials, direct labor, and factory overhead. The following summarizes the primary source documents used in a factory to allocate these costs.

Type of cost	*Name of source document*	*Description of source document*
Direct materials	Materials requisition	Authorizes materials to be taken from the storeroom for use on a job.
Direct labor	Time ticket	A form filled out by employees that reports how much time they spent on each job.
Factory overhead	Accountant's worksheet	Factory overhead costs are not allocated to each job based on actual costs. They are allocated based on an estimate called a predetermined overhead rate.

FACTORY OVERHEAD

Factory overhead costs are not directly associated with specific jobs, so it is nearly impossible to allocate actual factory costs to jobs. Instead, accountants estimate factory overhead as a percentage of another activity, such as direct labor, direct materials, or machine hours, and charge factory overhead to the job based on that activity.

For example, if factory overhead is estimated as percentage of direct labor, factory overhead is allocated to jobs in relation to the direct labor incurred on that job. As an example, if the factory overhead budget for the upcoming year is $150,000 and the direct labor budget is $100,000 the predetermined factory overhead rate would be 150% of direct labor ($150,000 / $100,000 = 150%).

The process of allocating factory overhead to jobs is called *applying* factory overhead. At the end of the period, the factory overhead applied will not equal the actual factory overhead costs incurred. This is because the factory overhead applied is based on an estimate.

For example, assume that a company incurred $10,000 of factory overhead costs during the period. The company applies factory overhead to work in process at 150% of direct labor costs, and direct labor costs were $6,800. The general ledger account for factory overhead would appear as follows:

Factory Overhead	
Actual	Applied
10,000	10,200 ($6,800 * 150%)

The balance of factory overhead is $200 on the credit side. Factory overhead is said to be *overapplied*. If the balance on the debit side happened to be greater than the credit side, factory overhead would be *underapplied*. Assuming such balances in factory overhead are small, the factory overhead balance is journalized against Cost of Goods Sold to make its balance zero at the end of the period.

A simple example of job order costing is presented on the next page. The solution follows.

USEFUL GUIDED EXAMPLES
Here are some guided examples to watch on recording transactions in a job order cost accounting system.

Accounting for raw materials:
www.viddler.com/embed/ab31783/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

Accounting for labor:
www.viddler.com/embed/45270480/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

Accounting for factory overhead:
www.viddler.com/embed/ab33e08d/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

Calculating factory overhead predetermined rates:
www.viddler.com/embed/acde485c/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

Journal entry for over or under-applied factory overhead:
www.viddler.com/embed/e81c1ad0/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

Recording job order cost transactions:
www.viddler.com/embed/de15f908/?f=1&autoplay=0&player=full&disablebranding=0" width="545" height="451" frameborder="0"></iframe>

EXAMPLE: ACCOUNTING IN A JOB ORDER COST ACCOUNTING SYSTEM

A clothing manufacturer had the following transactions in its first month of operations relating to its only job, Job #101.

a. Purchased 500 yards of silk @ $8 per yard for cash.
b. Requisitioned 300 yards of silk to produce Job #101.
c. Incurred 50 hours of direct labor to produce Job #101; the average labor rate is $9 per hour.
d. Paid various factory overhead costs, $650.
e. Applied factory overhead at the rate of 150% of direct labor costs to Job #101.
f. Completed Job #101.
g. Sold Job #101, receiving cash of $4,400.

INSTRUCTIONS

1. Enter the transactions in the T-accounts below. Assume the opening balance of Cash is $9,000.
2. Determine the ending balance of each account.
3. What was the gross profit earned on Job #101?
4. What was the gross margin ratio earned on Job #101?
5. If management had expected a gross margin ratio of 20% on Job #101, do you believe the actual results warrant further investigation by management? Why or why not?
6. Is factory overapplied or underapplied, and by how much?

Cash	
9,000	

Raw materials inventory	

Work in Process Inventory	

Finished Goods Inventory	

Wages Payable	

Sales	

Cost of Goods Sold	

Factory Overhead	

SOLUTIONS TO EXAMPLE
1 and 2.

Cash			
Bal	9000	4000	(a)
(h)	4400	650	(e)
Bal	8750		

Raw materials inventory			
(a)	4000	2400	(b)
Bal	1600		

Work in Process Inventory			
(b)	2400		
©	450		
(f)	675	3525	(g)
Bal	0		

Finished Goods Inventory			
(g)	3525	3525	(h)
Bal	0		

Wages Payable			
		450	©
		450	Bal

Sales			
		4400	(h)
		4400	Bal

Cost of Goods Sold			
(h)	3525		
Bal	3525		

Factory Overhead			
(e)	650	675	(f)
		25	Bal

3. The gross profit on the job was $875 ($4,400 sales price - $3,525 cost of goods sold).

4. The gross margin ratio was 19.9%, rounded to one decimal ($875 gross profit / $4,400 sales price).

5. The actual gross margin ratio was 19.9%, compared to the plan of 20%. Management should not investigate the costs further.

6. Factory overhead is overapplied by $25.