

Principles of Accounting

Lecture 5

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Chapter 3: The Adjusting Process

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Learning objectives:

- 1 Differentiate between cash basis accounting and accrual basis accounting
- 2 Define and apply the time period concept, revenue recognition, and matching principles
- 3 Explain the purpose of and journalize and post adjusting entries
- 4 Explain the purpose of and prepare an adjusted trial balance
- 5 Identify the impact of adjusting entries on the financial statements



Differentiate between cash basis accounting and accrual basis accounting

There are two ways to record transactions—cash basis accounting or accrual basis accounting.

- **Cash basis accounting** records only transactions with cash: cash receipts and cash payments. When cash is received, revenues are recorded. When cash is paid, expenses are recorded. As a result, revenues are recorded only when cash is received and expenses are recorded only when cash is paid. The cash basis of accounting is not allowed under Generally Accepted Accounting Principles (GAAP); however, small businesses will sometimes use this method. **The cash method is an easier accounting method to follow because it generally requires less knowledge of accounting concepts and principles. The cash basis accounting method also does a good job of tracking a business's cash flows.**

- **Accrual basis accounting** records the effect of each transaction as it occurs—that is, revenues are recorded when earned and expenses are recorded when incurred. Revenues are considered to be earned when the services or goods are provided to the customers. Most businesses use the accrual basis as covered in this book. The accrual basis of accounting provides a better picture of a business's revenues and expenses. It records revenue only when it has been earned and expenses only when they have been incurred. Under accrual basis accounting, it is irrelevant when cash is received or paid.

Example: Suppose on May 1, Smart Touch Learning paid \$1,200 for insurance for the next six months (\$200 per month). This prepayment represents insurance coverage for May through October. Under the cash basis method, Smart Touch Learning would record Insurance Expense of \$1,200 on May 1. This is because the cash basis method records an expense when cash is paid. Alternatively, accrual basis accounting requires the company to prorate the expense. Smart Touch Learning would record a \$200 expense every month from May through October. This is illustrated as follows:

	Cash basis		Accrual basis	
Cash Payment Made	May 1:	\$ 1,200	May 1:	\$ 1,200
Expense Recorded	May 1:	\$ 1,200	May 31:	\$ 200
			June 30:	200
			July 31:	200
			August 31:	200
			September 30:	200
			October 31:	200
Total Expense Recorded		<u>\$ 1,200</u>		<u>\$ 1,200</u>

Cash Basis Accounting

Accounting method that records revenues only when cash is received and expenses only when cash is paid.

Accrual Basis Accounting

Accounting method that records revenues when earned and expenses when incurred.

Now let's see how the cash basis and the accrual basis methods account for revenues.

Example: Suppose on April 30, Smart Touch Learning received \$600 for services to be performed for the next six months (May through October). Under the cash basis method, Smart Touch Learning would record \$600 of revenue when the cash is received on April 30. The accrual basis method, though, requires the revenue to be recorded only when it is earned. Smart Touch Learning would record \$100 of revenue each month for the next six months beginning in May.

	Cash basis		Accrual basis	
Cash Received	April 30:	\$ 600	April 30:	\$ 600
Revenue Recorded	April 30:	\$ 600	May 31:	\$ 100
			June 30:	100
			July 31:	100
			August 31:	100
			September 30:	100
			October 31:	100
Total Revenue Recorded		<u>\$ 600</u>		<u>\$ 600</u>

Notice that under both methods, cash basis and accrual basis, the total amount of revenues and expenses recorded by October 31 was the same. The major difference between a cash basis accounting system and an accrual basis accounting system is the timing of recording the revenue or expense.

Try It!

How much advertising expense should Pink Peonies Law Firm record for the two months ending February 28 under the

- a. \$3,000 advertising expense using cash basis

- b. \$600 * advertising expense using accrual basis

\$3,000	Advertising prepaid on January 1 for 10 months
÷ 10	Months
\$300	Advertising expense per month

\$300	Advertising expense per month
× 2	months
\$600	Advertising expense for January and February

Comparing cash and accrual basis accounting for revenues

Try It!

Protection Home provides house-sitting for people while they are away on vacation. Some of its customers pay immediately after the job is finished. Some customers ask that the business send them a bill. As of the end of the year, Protection Home has collected \$900 from cash-paying customers. Protection Home's remaining customers owe the business \$1,300.

How much service revenue would Protection Home have for the year under the

a. cash basis?

b. accrual basis?

a. \$ 900 service revenue using cash basis

b. \$2,200 * service revenue using accrual basis

* Calculations:

$$\$900 + \$1,300 = \$2,200 \text{ service revenue}$$



Define and apply the time period concept, revenue recognition, and matching principles

As we have seen, the timing and recognition of revenues and expenses are the key differences between the cash basis and accrual basis methods of accounting. These differences can be explained by understanding

The Time Period Concept

Time Period Concept

Assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

Fiscal Year

An accounting year of any 12 consecutive months that may or may not coincide with the calendar year.

Smart Touch Learning will know with 100% certainty how well it has operated only if the company sells all of its assets, pays all of its liabilities, and gives any leftover cash to its stockholders. For obvious reasons, it is not practical to measure income this way. Because businesses need periodic reports on their affairs, the **time period concept** assumes that a business's activities can be sliced into small time segments and that financial statements can be prepared for specific periods, such as a month, quarter, or year.

The basic accounting period is one year, and most businesses prepare annual financial statements. The 12-month accounting period used for the annual financial statements is called a **fiscal year**. For most companies, the annual accounting period is the calendar year, from January 1 through December 31. Other companies use a fiscal year that ends on a date other than December 31. The year-end date is usually the low point in business activity for the year. Retailers are a notable example. For instance, Wal-Mart Stores, Inc., and J. C. Penney Company, Inc., use a fiscal year that ends around January 31 because the low point of their business activity comes about a month after the holidays.

The Revenue Recognition Principle

The **revenue recognition principle**¹ tells accountants when to record revenue and requires companies follow a five step process:

Step 1: Identify the contract with the customer. A contract is an agreement between two or more parties that creates enforceable rights and obligations.

Step 2: Identify the performance obligations in the contract. A performance obligation is a contractual promise with a customer to transfer a distinct good or service.

A contract might have multiple performance obligations.² For example, AT&T, Inc. often provides a new phone to customers who sign a two-year cellular service agreement. This represents two distinct performance obligations: the cellular service agreement and the new phone.

Step 3: Determine the transaction price. The transaction price is the amount that the entity expects to be entitled to as a result of transferring goods or services to the customer.

Step 4: Allocate the transaction price to the performance obligations in the contract. If the transaction has multiple performance obligations, the transaction price will need to be allocated among the different performance obligations.

Step 5: Recognize revenue when (or as) the entity satisfies each performance obligation. The business will recognize revenue when (or as) it satisfies each performance obligation by transferring a good or service to a customer. A good or service is considered transferred when the customer obtains control of the good or service. The amount of revenue recognized is the amount allocated to the satisfied performance obligation.

Revenue Recognition Principle

Requires companies to record revenue when (or as) the entity satisfies each performance obligation.

The Matching Principle

The **matching principle** (sometimes called the *expense recognition principle*) guides accounting for expenses and ensures the following:

- * All expenses are recorded when they are incurred during the period.
- * Expenses are matched against the revenues of the period.

To match expenses against revenues means to subtract expenses incurred during one month from revenues earned during that same month. The goal is to compute an accurate net income or net loss for the time period.

There is a natural link between some expenses and revenues. For example, Smart Touch Learning pays a commission to the employee who sells the e-learning company's services. The commission expense is directly related to the e-learning company's revenue earned. Other expenses are not so easy to link to revenues. For example, Smart Touch Learning's monthly rent expense occurs regardless of the revenues earned that month. The matching principle tells us to identify those expenses with a particular period, such as a month or a year, when the related revenue occurred. The business will record rent expense each month based on the rental agreement.

Matching Principle

Guides accounting for expenses, ensures that all expenses are recorded when they are incurred during the period, and matches those expenses against the revenues of the period.

Applying the revenue recognition principle

Seacoast Magazine sells subscriptions for \$36 for 18 issues. The company collects cash in advance and then mails out the magazines to subscribers each month.

Apply the revenue recognition principle to determine

- when *Seacoast Magazine* should record revenue for this situation.
- the amount of revenue *Seacoast Magazine* should record for eight issues.

- Seacoast Magazine* should record revenue when each performance obligation has been satisfied – i.e. when the company mails the magazines to subscribers (not when the cash is collected in advance). The company should record revenue monthly.
- Seacoast Magazine* should record \$16 of revenue for eight issues.

Calculations:

$$\text{\$36 collected in advance for 18 issues} / 18 \text{ issues} = \text{\$2 revenue earned per issue}$$

Thus,

$$\text{\$2 revenue per issue} \times 8 \text{ issues} = \text{\$16 revenue earned for 8 issues}$$



Applying the matching principle

Suppose on January 1, Andrew's Tavern prepaid rent of \$16,800 for the full year.

At November 30, how much rent expense should be recorded for the period January 1 through November 30?

At November 30, rent expense of \$15,400 should be recorded.

Calculations:

\$16,800	Rent prepaid on January 1 for 1 year
÷ 12	Months
\$ 1,400	Rent expense per month

Thus,

\$ 1,400	Rent expense per month
× 11	Months
\$15,400	Rent expense for January through November



**Explain the purpose of and journalize
and post adjusting entries**

WHAT ARE ADJUSTING ENTRIES, AND HOW DO WE RECORD THEM?

The end-of-period process begins with the trial balance, which you learned how to prepare in the previous chapter. Exhibit 3-1 is the unadjusted trial balance of Smart Touch Learning at December 31, 2018.

Exhibit 3-1 | Unadjusted Trial Balance

SMART TOUCH LEARNING Unadjusted Trial Balance December 31, 2018		
	Balance	
Account Title	Debit	Credit
Cash	\$ 12,200	
Accounts Receivable	1,000	
Office Supplies	500	
Prepaid Rent	3,000	
Land	20,000	
Building	60,000	
Furniture	18,000	
Accounts Payable		\$ 200
Utilities Payable		100
Unearned Revenue		600
Notes Payable		60,000
Common Stock		48,000
Dividends	5,000	
Service Revenue		16,500
Rent Expense	2,000	
Salaries Expense	3,600	
Utilities Expense	100	
Total	<u>\$ 125,400</u>	<u>\$ 125,400</u>

This *unadjusted trial balance* lists the revenues and expenses of the e-learning company for November and December. But these amounts are incomplete because they omit various revenue and expense transactions. Accrual basis accounting requires the business to review the unadjusted trial balance and determine whether any additional revenues and expenses need to be recorded. Are there revenues that Smart Touch Learning has earned that haven't been recorded yet? Are there expenses that have occurred that haven't been journalized?

For example, consider the Office Supplies account in Exhibit 3-1. Smart Touch Learning uses office supplies during the two months. This reduces the office supplies on hand (an asset) and creates an expense (Supplies Expense). It is a waste of time to record Supplies Expense every time office supplies are used. But by December 31, enough of the \$500 of Office Supplies on the unadjusted trial balance (Exhibit 3-1) have probably been used that we need to adjust the Office Supplies account. This is an example of why we need to adjust some accounts at the end of the accounting period.

An **adjusting entry** is completed at the end of the accounting period and records revenues to the period in which they are earned and expenses to the period in which they occur. Adjusting entries also update the asset and liability accounts. Adjustments are needed to properly measure several items such as:

1. Net income (loss) on the income statement
2. Assets and liabilities on the balance sheet

There are two basic categories of adjusting entries: *deferrals* and *accruals*. In a deferral adjustment, the cash payment occurs before an expense is incurred or the cash receipt occurs before the revenue is earned. Deferrals defer the recognition of revenue or expense to a date after the cash is received or paid. Accrual adjustments are the opposite. An accrual records an expense before the cash is paid, or it records the revenue before the cash is received.

The two basic categories of adjusting entries can be further separated into four types:

1. Deferred expenses (deferral)
2. Deferred revenues (deferral)
3. Accrued expenses (accrual)
4. Accrued revenues (accrual)

Adjusting Entry

An entry made at the end of the accounting period that is used to record revenues to the period in which they are earned and expenses to the period in which they occur.

Deferred Expenses

Deferred expenses, also called prepaid expenses, are advance payments of future expenses. They are deferrals because the expense is not recognized at the time of payment but deferred until they are used up. Such payments are considered assets rather than expenses until they are used up. When the prepayment is used up, the used portion of the asset becomes an expense via an adjusting entry.

Prepaid Rent

Remember Transaction 10 in Chapter 2? Smart Touch Learning prepaid three months' office rent of \$3,000 (\$1,000 per month $\times$ 3 months) on December 1, 2018. The entry to record the payment was as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Prepaid Rent	3,000	
	Cash		3,000
	<i>Paid rent in advance.</i>		

After posting, Prepaid Rent has a \$3,000 debit balance.

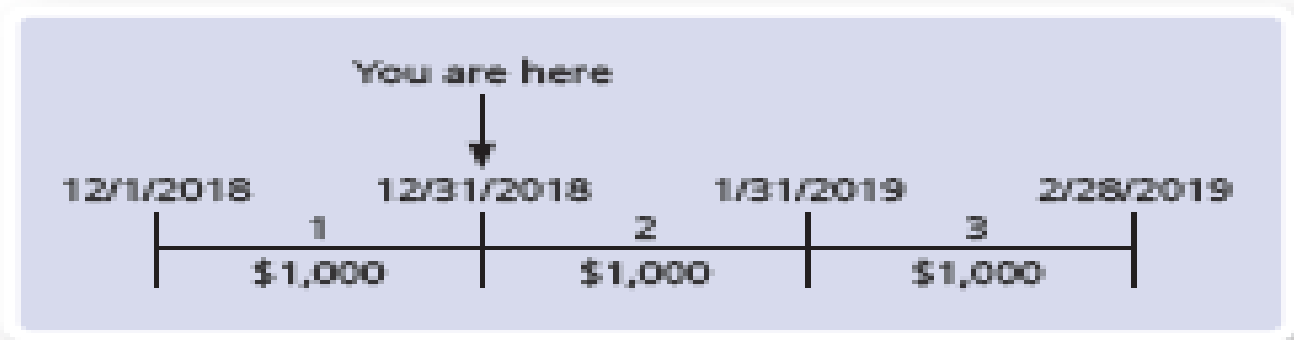
Prepaid Rent	
Dec. 1	3,000

Deferred Expense

An asset created when a business makes advance payments of future expenses.

$$\left. \begin{array}{l} \text{A} \uparrow \downarrow \\ \text{Prepaid} \\ \text{Rent} \uparrow \\ \text{Cash} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} \text{L} \\ + \\ \text{E} \end{array} \right.$$

Throughout December, Prepaid Rent maintains this balance. But \$3,000 is *not* the amount of Prepaid Rent for the balance sheet at December 31. Why?



As of December 31, Prepaid Rent should be decreased for the amount that has been used up. The used-up portion is one month of the three months prepaid, or one-third of the prepayment. Recall that an asset that has expired is an *expense*. The adjusting entry transfers \$1,000 ($\$3,000 \times 1/3$) from Prepaid Rent to Rent Expense. The adjusting entry is as follows:

$$\left. \begin{array}{c} \text{A} \downarrow \\ \text{Prepaid} \\ \text{Rent} \downarrow \end{array} \right\} = \left\{ \begin{array}{c} \text{L} \\ \text{Rent} \\ \text{Expense} \uparrow \end{array} \right. + \left\{ \begin{array}{c} \text{E} \downarrow \\ \text{Rent} \\ \text{Expense} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Rent Expense	1,000	
	Prepaid Rent		1,000
	<i>To record rent expense.</i>		

After posting, Prepaid Rent and Rent Expense show correct ending balances:

Prepaid Rent				Rent Expense			
Dec. 1	3,000	1,000	Dec. 31	Nov. 15	2,000		
				Dec. 31	1,000		
Bal.	2,000			Bal.	3,000		

Prepaid Rent is an example of an asset that was overstated prior to journalizing and posting the adjusting entry. Notice that the ending balance in Prepaid Rent is now \$2,000. Because Prepaid Rent is an asset account for Smart Touch Learning, it should contain only two more months of rent on December 31 (for January and February). So we have \$1,000 rent per month times two months equals the \$2,000 Prepaid Rent balance.

If Smart Touch Learning had prepaid insurance, the same type of analysis would apply to the prepayment of three months of insurance. The only difference is in the account titles. Prepaid Insurance would be used instead of Prepaid Rent, and Insurance Expense would be used instead of Rent Expense.

Office Supplies

Office supplies are also accounted for as prepaid expenses. Let's look at another example. On November 3, Smart Touch Learning purchased \$500 of office supplies on account.

The December 31 unadjusted trial balance, therefore, still lists Office Supplies with a \$500 debit balance. But Smart Touch Learning's December 31 balance sheet should *not* report office supplies of \$500. Why not?

During November and December, the e-learning company used office supplies to conduct business. The cost of the supplies used becomes *Supplies Expense*. To measure Supplies Expense, the business first counts the office supplies on hand at the end of December. This

is the amount of the asset still owned by the business. Assume that office supplies costing \$100 remain on December 31. Then the business uses the Office Supplies T-account to determine the value of the supplies that were used:

Office Supplies			
Nov. 3	500		?
Bal.	100		

Amount of office supplies remaining →

← Amount of office supplies used – Supplies Expense

So, we can solve for the office supplies used as follows:

$$\begin{aligned}
 \text{Office Supplies balance before adjustment} &- \text{Office supplies used} = \text{Office supplies on hand} \\
 \$500 &- \text{Office supplies used} = \$100 \\
 \text{Office supplies used} &= \$400
 \end{aligned}$$

The December 31 adjusting entry updates Office Supplies and records Supplies Expense for November and December as follows:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Supplies Expense	400	
	Office Supplies		400
	<i>To record office supplies used.</i>		

$$\left. \begin{array}{c} \text{A} \downarrow \\ \text{Office} \\ \text{Supplies} \downarrow \end{array} \right\} = \left\{ \begin{array}{c} \text{L} \\ \text{Supplies} \end{array} + \begin{array}{c} \text{E} \downarrow \\ \text{Supplies} \\ \text{Expense} \uparrow \end{array} \right.$$

After posting the adjusting entry, the December 31 balance of Office Supplies is correctly reflected as \$100 and the Supplies Expense is correctly reflected as \$400.

Office Supplies			
Nov. 3	500	400	Dec. 31
Bal.	100		

→

Supplies Expense			
Dec. 31	400		
Bal.	400		

The Office Supplies account then enters January with a \$100 balance. If the adjusting entry for Office Supplies had not been recorded, the asset would have been overstated and Supplies Expense would have been understated. In making the adjusting entry, the correct balance of Office Supplies, \$100, is now reported on the balance sheet as of December 31 and the income statement is correctly reporting an expense of \$400.

Depreciation

Property, plant, and equipment (also called *plant assets*) are long-lived, tangible assets used in the operation of a business. Examples include land, buildings, equipment, furniture, and automobiles. As a business uses these assets, their value and usefulness decline. The decline in usefulness of a plant asset is an expense, and accountants systematically spread the asset's cost over its useful life. The allocation of a plant asset's cost over its useful life is called **depreciation**. For example, a business might pay cash for an automobile when purchased, but the automobile will last for years, so depreciation allocates the cost spent on the car over the time the business uses the car. All plant assets are depreciated, with the exception of land. We record no depreciation for land because, unlike buildings and equipment, it does not have a definitive or clearly estimable useful life, so it is difficult to allocate the cost of land.

Property, Plant, and Equipment

Long-lived, tangible assets, such as land, buildings, and equipment, used in the operation of a business.

Depreciation

The process by which businesses spread the allocation of a plant asset's cost over its useful life.

Similarity to Prepaid Expenses The concept of accounting for plant assets is similar to that of prepaid expenses. The major difference is the length of time it takes for the asset to be used up. Prepaid expenses usually expire within a year, but plant assets remain useful for several years. As a business uses its plant assets, an adjusting entry is required to allocate the assets' costs. The adjusting entry records the cost allocation to an expense account called Depreciation Expense.

Let's review an example for Smart Touch Learning. On December 2, the business received a contribution of furniture with a market value of \$18,000 from Sheena Bright. In exchange, Smart Touch Learning issued shares of stock to Bright and made the following journal entry:

$$\left. \begin{array}{c} \text{A} \uparrow \\ \text{Furniture} \uparrow \end{array} \right\} = \left\{ \begin{array}{c} \text{L} \\ \text{Common Stock} \uparrow \end{array} \right.$$

Date	Accounts and Explanation	Debit	Credit
Dec. 2	Furniture	18,000	
	Common Stock		18,000
	<i>Contribution of furniture in exchange for common stock.</i>		

After posting, the Furniture account has an \$18,000 balance:

Furniture	
Dec. 2	18,000

Smart Touch Learning believes the furniture will remain useful for five years, and at the end of five years, Smart Touch Learning believes the furniture will be worthless. The expected value of a depreciable asset at the end of its useful life is called the **residual value**. Smart Touch Learning will use the straight-line method to compute the amount of depreciation. The **straight-line method** allocates an equal amount of depreciation each year and is calculated as:

$$\text{Straight-line depreciation} = (\text{Cost} - \text{Residual value}) / \text{Useful life}$$

Smart Touch Learning will calculate the depreciation of the furniture for the month of December as:

$$\begin{aligned} \text{Straight-line depreciation} &= (\text{Cost} - \text{Residual value}) / \text{Useful life} \\ &= (\$18,000 - \$0) / 5 \text{ years} \\ &= \$3,600 \text{ per year} / 12 \text{ months} \\ &= \$300 \text{ per month} \end{aligned}$$

Depreciation expense for December is recorded by the following adjusting entry:

Residual Value

The expected value of a depreciable asset at the end of its useful life.

Straight-Line Method

A depreciation method that allocates an equal amount of depreciation each year. $(\text{Cost} - \text{Residual value}) / \text{Useful life}$.

A↓		L +	E↓
Accumulated Depreciation—Furniture↑	}	-	Depreciation Expense—Furniture↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Furniture	300	
	Accumulated Depreciation—Furniture		300
	<i>To record depreciation on furniture.</i>		

The Accumulated Depreciation Account Notice that in the preceding adjusting entry for depreciation, we credited Accumulated Depreciation—Furniture and not the asset account Furniture. Why? We need to keep the original cost of the furniture separate from the accumulated depreciation because of the cost principle. Managers can then refer to the Furniture account to see how much the asset originally cost. This information may help decide how much to sell the asset for in the future or how much to pay for new furniture. The **Accumulated Depreciation** account is the sum of all depreciation expense recorded for the depreciable asset to date. Accumulated Depreciation will increase (accumulate) over time.

Accumulated Depreciation is a contra asset, which means that it is an asset account with a normal credit balance. Contra means opposite. A **contra account** has two main characteristics:

- A contra account is paired with and is listed immediately after its related account in the chart of accounts and associated financial statement.
- A contra account's normal balance (debit or credit) is the opposite of the normal balance of the related account.

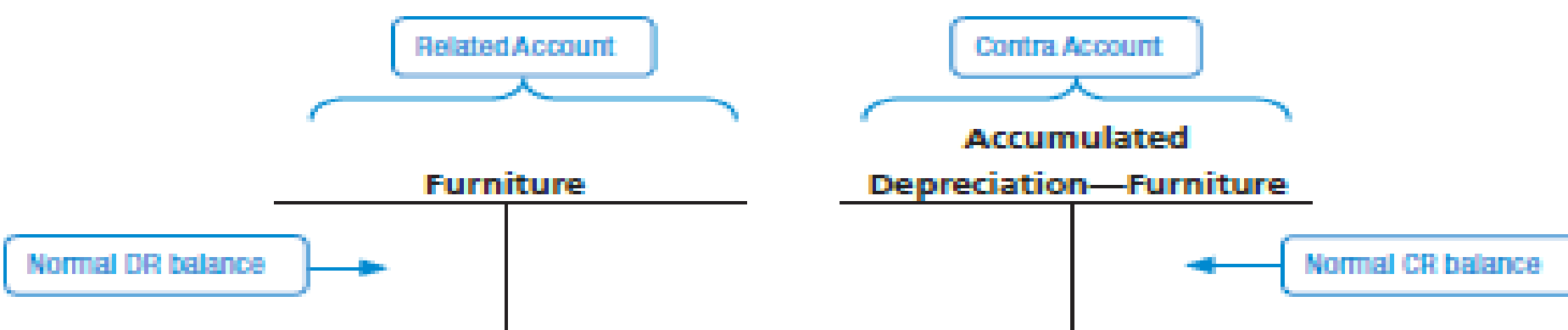
For example, Accumulated Depreciation—Furniture is the contra account that follows the Furniture account on the balance sheet. The Furniture account has a normal debit balance, so Accumulated Depreciation—Furniture, a contra asset, has a normal credit balance.

Accumulated Depreciation

The sum of all the depreciation expense recorded to date for a depreciable asset.

Contra Account

An account that is paired with, and is listed immediately after, its related account in the chart of accounts and associated financial statement and whose normal balance is the opposite of the normal balance of the related account.



A business may have a separate Accumulated Depreciation account for each depreciable asset. Because Smart Touch Learning has both a Building and a Furniture account, it also has these two accounts: Accumulated Depreciation—Building, and Accumulated Depreciation—Furniture. However, small companies often have only one Accumulated Depreciation account for all of their depreciable assets.

After posting the depreciation, the accounts appear as follows:

Furniture		Accumulated Depreciation—Furniture		Depreciation Expense—Furniture	
Dec. 2	18,000			Dec. 31	
			300		300

The Accumulated Depreciation account accumulates the depreciation expense. This means that next month an additional \$300 will be added to the Accumulated Depreciation—Furniture account creating a balance of \$600, representing two months of depreciation. At the end of three months, the Accumulated Depreciation—Furniture account will have a balance of \$900 (\$300 per month x 3 months).

Book Value

A depreciable asset's cost minus accumulated depreciation.

Book value of furniture:

Furniture	\$ 18,000
Less: Accumulated Depreciation—Furniture	(300)
Book value of furniture	<u><u>\$ 17,700</u></u>

Book Value The balance sheet reports both Furniture and Accumulated Depreciation—Furniture. Because it is a contra account, Accumulated Depreciation—Furniture is subtracted from Furniture. The resulting net amount (cost minus accumulated depreciation) of a plant asset is called its **book value**. The book value represents the cost invested in the asset that the business has not yet expensed. For Smart Touch Learning's furniture, the book value on December 31 is as follows:

Depreciation on the building purchased on December 1 would be recorded in a similar manner. Suppose that the monthly depreciation is \$250. The following adjusting entry would record depreciation for December:

A↓		L +	E↓
Accumulated Depreciation—Building↑	-		Depreciation Expense—Building↑

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Depreciation Expense—Building	250	
	Accumulated Depreciation—Building		250
	<i>To record depreciation on building.</i>		

Remember, an increase in a contra asset, such as Accumulated Depreciation, decreases total assets. This is because a contra asset has a credit balance and credits decrease assets.

Had Smart Touch Learning not recorded the adjusting entries for depreciation on the furniture and building, plant assets would have been overstated and expenses would have been understated. After recording the adjusting entries, property, plant, and equipment (plant assets) are reported at the correct net amount, as shown on the December 31 partial balance sheet in Exhibit 3-2.

Exhibit 3-2 | **Property, Plant, and Equipment on the Balance Sheet of Smart Touch Learning**

SMART TOUCH LEARNING
Balance Sheet (Partial)
December 31, 2018

Property, Plant, and Equipment

Land		\$ 20,000
Building	\$ 60,000	
Less: Accumulated Depreciation—Building	(250)	59,750
Furniture	18,000	
Less: Accumulated Depreciation—Furniture	(300)	17,700
Property, Plant, and Equipment, Net		\$ 97,450

Deferred Revenues

Remember, deferred (or unearned) revenues occur when the company receives cash before it does the work or delivers a product to earn that cash. The company owes a product or a service to the customer, or it owes the customer his or her money back. Only after completing the job or delivering the product does the business *earn* the revenue. Because of this delay, unearned revenue is a liability and is also called **deferred revenue**. The revenue associated with the work or product is not recognized when the cash is received but is instead deferred until it is earned.

Suppose, for example, a law firm engages Smart Touch Learning to provide e-learning services for the next 30 days, agreeing to pay \$600 in advance. Smart Touch Learning collected the amount on December 21 and recorded the following entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 21	Cash	600	
	Unearned Revenue		600
	<i>Collected cash for future services.</i>		

The liability account, Unearned Revenue, now shows that Smart Touch Learning owes \$600 in services.

Unearned Revenue	
600	Dec. 21

Deferred Revenue

A liability created when a business collects cash from customers in advance of completing a service or delivering a product.

$$\left. \begin{array}{c} A \uparrow \\ \text{Cash} \uparrow \end{array} \right\} - \left\{ \begin{array}{c} L \uparrow \\ \text{Unearned} \\ \text{Revenue} \uparrow \end{array} \right. + \frac{E}{}$$

During the last 10 days of the month—December 22 through December 31—Smart Touch Learning will ~~earn~~ approximately one-third (10 days divided by 30 days) of the \$600, or \$200. Therefore, Smart Touch Learning makes the following adjusting entry to record earning \$200 of revenue:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Unearned Revenue	200	
	Service Revenue		200
	<i>To record service revenue earned that was collected in advance.</i>		

$$\begin{array}{c} \underline{A} \\ \left. \vphantom{\begin{array}{c} \underline{A} \\ \end{array}} \right\} - \left\{ \begin{array}{c} \underline{L \downarrow} \\ \text{Unearned} \\ \text{Revenue} \downarrow \end{array} + \begin{array}{c} \underline{E \uparrow} \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right. \end{array}$$

This adjusting entry shifts \$200 from the liability account to the revenue account. Service Revenue increases by \$200, and Unearned Revenue decreases by \$200. Now both accounts are up to date at December 31:

Unearned Revenue				Service Revenue			
Dec. 31	200	600	Dec. 21	5,500	Nov. 8		
		400	Bal.	3,000	Nov. 10		
				8,000	Dec. 28		
				200	Dec. 31		
				16,700	Bal.		

Had the adjusting entry not been made, the liability, Unearned Revenue, would be overstated and Service Revenue would be understated.

Accrued Expenses

Businesses often incur expenses before paying for them. The term **accrued expense** refers to an expense of this type. An accrued expense hasn't been paid for yet. Consider an employee's salary. Salaries Expense grows as the employee works, so the expense is said to *accrue*. Another accrued expense is interest expense on a note payable. Interest accrues as time passes on the note. An accrued expense always creates an accrued liability.

Corporations do not make daily or weekly journal entries to accrue expenses. Instead, they wait until the end of the accounting period. They make an adjusting entry to bring each expense (and the related liability) up to date for the financial statements.

Accrued Expense

An expense that the business has incurred but has not yet paid.

Accrued Salaries Expense

Smart Touch Learning pays its employee a monthly salary of \$2,400—half on the 15th and half on the first day of the next month. On the next page is a calendar for December and the first week in January with the two pay days circled.

December 2018						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						Dec 1
2	3	4	5	6	7	8
9	10	11	12	13	14	15 Pay Day
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	Jan 1 Pay Day	2	3	4	5

During December, the company paid the first half-month salary on Saturday, December 15, and made this entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 15	Salaries Expense	1,200	
	Cash		1,200
	<i>Paid salaries.</i>		

$$\left. \begin{array}{c} \text{A} \downarrow \\ \text{Cash} \downarrow \end{array} \right\} - \left\{ \begin{array}{c} \text{L} \\ \text{Salaries Payable} \uparrow \end{array} + \begin{array}{c} \text{E} \downarrow \\ \text{Salaries Expense} \uparrow \end{array} \right.$$

The December 15 entry records only the first half of December's salaries expense. The second payment of \$1,200 will occur on January 1; however, the expense was incurred in December, so the expense must be recorded in December. On December 31, Smart Touch Learning makes the following adjusting entry:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Salaries Expense	1,200	
	Salaries Payable		1,200
	<i>To accrue salaries expense.</i>		

$$\left. \begin{array}{c} \text{A} \\ \text{Salaries Expense} \uparrow \end{array} \right\} - \left\{ \begin{array}{c} \text{L} \uparrow \\ \text{Salaries Payable} \uparrow \end{array} + \begin{array}{c} \text{E} \downarrow \\ \text{Salaries Expense} \uparrow \end{array} \right.$$

After posting, both Salaries Expense and Salaries Payable are up to date:

Salaries Payable		Salaries Expense	
	1,200 Dec. 31	Nov. 15	1,200
	1,200 Bal.	Dec. 1	1,200
		Dec. 15	1,200
		Dec. 31	1,200
		Bal.	4,800

Salaries Expense shows a full two months' salary, and Salaries Payable shows the liability owed at December 31. This is an example of a liability that was understated before the adjusting entry was made. It also is an example of the matching principle: We are recording December's Salaries Expense in December so it will be reported on the same income statement as December's revenues.

Future Payment of Accrued Salaries Expense The adjusting entry at December 31 creates a liability that will eventually be paid. In this case, Smart Touch Learning will pay its employee the second half of December's wages on January 1. Because the expense has already been recorded, Smart Touch Learning will not record the expense again. To do so would record the expense twice, thus overstating the expense account. Instead, the business will decrease the amount of the liability, Salaries Payable, with a debit and record the cash payment. On January 1, Smart Touch Learning would record the following journal entry:

Date	Accounts and Explanation	Debit	Credit
Jan. 1	Salaries Payable	1,200	
	Cash		1,200
	<i>To record payment of accrued expense.</i>		

$$\left. \begin{array}{c} \text{A} \downarrow \\ \text{Cash} \downarrow \end{array} \right\} - \left\{ \begin{array}{c} \text{L} \downarrow \\ \text{Salaries Payable} \downarrow \end{array} + \begin{array}{c} \text{E} \\ \end{array} \right.$$

Don't confuse this entry with an adjusting entry. Adjusting entries are recorded only at the end of the accounting period and are used to record either revenue earned or expenses incurred. This entry is a journal entry. It is simply recording an everyday business transaction—the payment of salaries previously accrued. In this example, the amount paid for salaries was equal to the amount of the liability in the adjusting entry. Sometimes, however, the amount paid might be different than the liability in the adjusting entry. For example, assume that instead of making a payment for salaries on January 1, Smart Touch Learning doesn't make the payment until January 15 and pays a full month's salary. By delaying the payment, Smart Touch Learning incurs additional days of salaries expense. The journal entry to record the payment on January 15 will not only decrease the payable recorded in the adjusting entry but will also record any additional expense incurred.

Accrued Interest Expense

Borrowing money creates an additional liability for a Note Payable. Remember the purchase of the building on December 1, 2018? Smart Touch Learning purchased a \$60,000 building in exchange for a loan. Smart Touch Learning signed a one-year loan and recorded the following entry using the Notes Payable account:

Date	Accounts and Explanation	Debit	Credit
Dec. 1	Building	60,000	
	Notes Payable		60,000
	<i>Purchase of building with note.</i>		

Interest on this note is payable one year later, on December 1, 2019. Although the company won't make the interest payment for a year, the company must record the amount of interest expense that has been incurred by December 31, 2018. The company will make an adjusting entry to record interest expense for one month (December 1–December 31).

The formula for computing the interest is as follows:

$$\text{Amount of interest} = \text{Principal} \times \text{Interest rate} \times \text{Time}$$

$$\left. \begin{array}{c} \text{A} \uparrow \\ \text{Building} \uparrow \end{array} \right\} - \left\{ \begin{array}{c} \text{L} \uparrow \\ \text{Notes Payable} \uparrow \end{array} + \begin{array}{c} \text{E} \end{array} \right.$$



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The December 31 adjusting entry to accrue interest expense is as follows:

$$\frac{A}{\left. \right\}} - \left\{ \frac{L \uparrow}{\text{Interest Payable} \uparrow} + \frac{E \downarrow}{\text{Interest Expense} \uparrow} \right.$$

Interest Payable		Interest Expense	
100	Dec. 31	Dec. 31	100
100	Bal.	Bal.	100

Accrued Revenue

A revenue that has been earned but for which the cash has not yet been collected.

$$\left. \begin{array}{c} \text{A} \uparrow \\ \text{Accounts} \\ \text{Receivable} \uparrow \end{array} \right\} = \left\{ \begin{array}{c} \text{L} \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right. + \left\{ \begin{array}{c} \text{E} \uparrow \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Accrued Revenues

As we have just seen, expenses can occur before a company makes a cash payment for them, which creates an accrued expense. Similarly, businesses can earn revenue before they receive the cash. This creates an **accrued revenue**, which is a revenue that has been earned but for which the cash has not yet been collected.

Assume that Smart Touch Learning is hired on December 15 to perform e-learning services, beginning on December 16. Under this agreement, the business will earn \$1,600 monthly and receive payment on January 15. At the date of hiring, Smart Touch Learning does not record a journal entry because revenue has not yet been earned. During December, it will earn half a month's fee, \$800, for work December 16 through December 31. On December 31, Smart Touch Learning makes the following adjusting entry to record the revenue earned December 16 through December 31:

Date	Accounts and Explanation	Debit	Credit
Dec. 31	Accounts Receivable	800	
	Service Revenue		800
	<i>To accrue service revenue.</i>		

The adjusting entry records the earned revenue and brings the balance of the Service Revenue account to \$17,500. In addition, the adjusting entry records an additional \$800 account receivable. Smart Touch Learning did not record cash because the business has not yet received payment on the services provided. The cash will not be received until January 15. Smart Touch Learning's account balances after posting the adjusting entry are:

Accounts Receivable				Service Revenue			
Nov. 10	3,000	2,000	Nov. 22		5,500	Nov. 8	
Dec. 31	800				3,000	Nov. 10	
Bal.	1,800				8,000	Dec. 28	
					200	Dec. 31	
					800	Dec. 31	
					17,500	Bal.	

Without the adjustment, Smart Touch Learning's financial statements would understate both an asset, Accounts Receivable, and a revenue, Service Revenue.

Future Receipt of Accrued Revenues The adjusting entry on December 31 records revenue earned for half a month and also creates an accounts receivable. When Smart Touch Learning receives the payment on January 15, the business will record the following entry:

Date	Accounts and Explanation	Debit	Credit
Jan. 15	Cash	1,600	
	Service Revenue		800
	Accounts Receivable		800
	<i>Performed services and received cash.</i>		

$$\left. \begin{array}{l} A \uparrow \\ \text{Cash} \uparrow \\ \text{Accounts} \\ \text{Receivable} \downarrow \end{array} \right\} = \left\{ \begin{array}{l} L \\ \text{Service} \\ \text{Revenue} \uparrow \end{array} \right.$$

Notice that on January 15, Smart Touch Learning records revenue only for the remaining half of the month (January 1–January 15). Smart Touch Learning recognizes that \$800 of revenue was already recorded in December. The entry on January 15 removes the accounts receivable and records the remaining revenue. If the business had incorrectly recorded \$1,600 of Service Revenue on January 15, the revenue would have been overstated in January.

ORIGINAL ENTRY

Exhibit 3-3 Deferral and Accrual Adjustments

ADJUSTING ENTRY

DEFERRALS—Cash receipt or Cash payment occurs first.

Prepaid Expenses

Prepaid Rent	XXX	
Cash		XXX
<i>Pay for rent in advance and record an asset first.</i>		

Rent Expense	XXX	
Prepaid Rent		XXX
<i>Adjust for rent used later.</i>		

Depreciation

Furniture	XXX	
Cash		XXX
<i>Pay for furniture in advance and record an asset first.</i>		

Depreciation Expense—Furniture	XXX	
Accumulated Depreciation—Furniture		XXX
<i>Adjust for depreciation (use) of asset later.</i>		

Unearned Revenues

Cash	XXX	
Unearned Revenue		XXX
<i>Receive cash in advance and record a liability first.</i>		

Unearned Revenue	XXX	
Service Revenue		XXX
<i>Adjust for revenue earned later.</i>		

ACCRUALS—Cash receipt or Cash payment occurs later.

Accrued Expenses

Salaries Expense	XXX	
Salaries Payable		XXX
<i>Accrual for expense incurred first.</i>		

Accrued Revenues

Accounts Receivable	XXX	
Service Revenue		XXX
<i>Accrual for revenue earned first.</i>		

Two rules to remember about adjusting entries:

1. Adjusting entries never involve the Cash account.
2. Adjusting entries either
 - a. Increase a revenue account (credit revenue) or
 - b. Increase an expense account (debit expense).

Panel A: Information for Adjustments

- a. Prepaid rent expired, \$1,000.
- b. Supplies used, \$400.
- c. Depreciation on furniture, \$300.
- d. Depreciation on building, \$250.
- e. Service revenue that was collected in advance and now has been earned, \$200.
- f. Accrued salaries expense, \$1,200.
- g. Accrued interest on note, \$100.
- h. Accrued service revenue, \$800.

Panel B: Adjusting Entries

Date	Accounts and Explanation	Debit	Credit
(a) Dec. 31	Rent Expense	1,000	
	Prepaid Rent		1,000
	<i>To record rent expense.</i>		
(b) 31	Supplies Expense	400	
	Office Supplies		400
	<i>To record office supplies used.</i>		
(c) 31	Depreciation Expense—Furniture	300	
	Accumulated Depreciation—Furniture		300
	<i>To record depreciation on furniture.</i>		
(d) 31	Depreciation Expense—Building	250	
	Accumulated Depreciation—Building		250
	<i>To record depreciation on building.</i>		
(e) 31	Unearned Revenue	200	
	Service Revenue		200
	<i>To record service revenue earned that was collected in advance.</i>		

- Panel A gives the data for each adjustment.

- Panel B shows the adjusting entries.

(f)	31	Salaries Expense	1,200	
		Salaries Payable		1,200
		<i>To accrue salaries expense.</i>		
(g)	31	Interest Expense	100	
		Interest Payable		100
		<i>To accrue interest expense.</i>		
(h)	31	Accounts Receivable	800	
		Service Revenue		800
		<i>To accrue service revenue.</i>		

■ Four types of adjusting entries:

- Deferred expenses (or prepaid expenses): advance payment of future expenses adjusted for amount used

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Asset		XXX

- Deferred revenues (or unearned revenues): advance receipts of future revenues adjusted for amount earned

Date	Accounts and Explanation	Debit	Credit
	Liability	XXX	
	Revenue		XXX

- Accrued expenses: expenses that have been incurred but not paid

Date	Accounts and Explanation	Debit	Credit
	Expense	XXX	
	Liability		XXX

- Accrued revenues: revenues that have been earned but not collected

Date	Accounts and Explanation	Debit	Credit
	Asset	XXX	
	Revenue		XXX



Thank You