NHI Style and Standards Guide

Version 1.0

NHI

NATIONAL HIGHWAY INSTITUTE

U.S. Department of Transportation
Federal Highway Administration

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Introduction

The National Highway Institute (NHI) is committed to developing and delivering quality transportation training to our customers and stakeholders. As advocates of adult learning principles, NHI recognizes that quality training depends on the quality of instructors and course materials. Both are necessary to provide our customers with the very best learning experience. For these reasons, NHI has an on-going commitment to assist the developers, instructors and participants in every way possible to make sure that learning occurs.

NHI recognizes the vital role that course materials play in the various stages of learning. This style and standards guide is designed to assist our course developers in preparing materials that are consistent in appearance and use and help participants achieve course outcomes, as well as serving as a useful reference tool for them when they return to their job site.

How to Use This Guide

The anticipated primary use of this guide is as a reference book – using the Table of Contents (TOC) or the MS Word or Adobe Acrobat search function to locate information as needed.

A secondary use is to browse the content in order to gain a broad understanding of the NHI style.

Instructions in this guide will generally be followed by a few examples of the guideline in practice. Often examples of situations in which the guideline does NOT apply follow these examples of the guideline in practice. The two sets of examples will be separated by the word *but* in lower-case italics, as shown below:

> Examples:
>
> - Mussels are aquatic mollusks.
>
> *but*
>
> - Muscles are animal tissue.

What This Document Is

This document is the product of lengthy research and consultation regarding NHI's training offerings. Elements of this style guide share the approach of the United States Government Printing Office (GPO) style guide and the FHWA Quick Reference.

This document will at times offer guidance that differs from other official publications. In these instances, the needs of NHI users have been carefully considered in the development of guidance specific to NHI courseware.

NHI Courseware Types

NHI offers three distinct types of courseware: Instructor-Led Training (ILT), Web-based Training (WBT), and Web-conference Training (WCT). The general guidelines provided in the main part of this document – grammar, use of numbers, the 'voice' of the document – apply to all three types. Specific differences are addressed below, and in the sections of this document related to the areas where these differences occur.

At the present time, all three types rely heavily on PowerPoint. PowerPoint presentations are either delivered directly by the instructor (ILT), or are converted to a Flash-based web presentation using Adobe Presenter 7.

Note that NHI web-delivered products use two Adobe learning tools: Presenter 7 and Connect. Adobe defines the difference between the two as follows:

Adobe Connect Professional is a suite of administrative tools that allow for secure web conferencing, development of compelling self-paced courses, ability to conduct interactive virtual classes, and the efficient management training programs.

It comprises of the following:
- Adobe Connect Pro Meeting allows you to conduct secure web conferencing communications or host live web training.
- Adobe Connect Pro Training is used to manage elearning courses and curricula, complete with surveys, tracking, analysis, and course management.
- Adobe Connect Pro Events is used to manage automated user registration, automated email reminders, and tracking for large online seminars and presentations.

Adobe Presenter 7 utilizes a plug-in that is integrated into Microsoft PowerPoint that allows for the creation of compressed, flash-enabled

presentations that incorporates audio, narration, quizzing functions, and other interactivity.

ILT

Instructor-led Training. Traditional classroom-based live face-to-face and video conference training. ILT courses may have a related online component, often in the form of an Executive Summary presentation. ILT courses typically provide printed materials, including a Reference Manual, Instructor Guide and Participant Workbook. For more information on ILT standards and specifications please visit: http://www.nhi.fhwa.dot.gov/resources/ilt_developer.aspx

WBT

Web-based Training. Individual, self-paced instruction. WBT courses may or may not provide physical materials to participants. WBT courses share many style elements with Web-conference Training courses (below). WBT courses may be repurposed from existing ILT or WCT offerings. For more information on WBT standards and specifications please visit: http://www.nhi.fhwa.dot.gov/resources/wbt_developer.aspx

WCT

Web-conference Training. An online meeting, led by a host and facilitator (instructor) with participants logging in from different locations at the same time. WCT courses may or may not provide physical materials to participants. WCT courses share many style elements with Web-Based Training courses (above). WCT courses may be repurposed from existing ILT offerings. For more information on WCT standards and specifications please visit: http://www.nhi.fhwa.dot.gov/resources/wct_developer.aspx

Where They Are Alike

The three distinct NHI courseware types ILT, WBT, and WCT share two commonalities. For all courseware types, learning outcomes are developed which state what participants will be able to do or know as a result of the material being taught. Learning outcomes must be written as observable and measurable performance. You will also find that for those courses that offer CEUs, various forms of assessments are administered to measure understanding the of course.

Where They Differ

ILT courses are delivered live, in a face-to-face classroom environment. ILT courses, therefore, have particular environment and logistical issues that WBT and WCT courses do not share. These issues affect the designer in that participants will be viewing the material on a large screen in a shared physical space, as opposed to having an individualized environment.

The user's control over the learning environment is also different, ranging from control of flow and timing in WBT offerings through shared control in WCT and little control in ILT. This control touches on things that may be of concern to the participant -- screen distance, the size of the displayed content, screen brightness, audio volume.

ILT developers are also concerned with the production and delivery of printed materials – the Instructor Guide (IG), Participant Workbook (PW), and the Reference Manual (RM) – that may not be an issue in web-delivered courses.

WCT courses are unique in that the pods (individual content windows) used to create separate onscreen areas in Adobe Presenter can be scaled during a WCT session. WCT course can also have a Participate Workbook and a Facilitators Guide.

Differences also occur in the way courses are structured, and in the structural taxonomy used. Under each individual appendix you will see how the three types of courseware should be structured.

One of NHI's goals is consistency across courseware. Consistency assists NHI branding efforts, so that an NHI course is recognizable as an NHI course, no matter how it is delivered. Uniformity of structure and taxonomy better prepares us to repurpose course materials for delivery in multiple formats. Consistency also assists our customers — a participant in a WBT course should be able to expect a similar look and feel when taking a WCT, for example. It also assists with partners that wish to use our materials for different efforts.

Style

General
- Use active voice, second person (you), present tense and conversational tone when appropriate
- Keep language simple, concise and consistent
- Avoid jargon and slang
- Use examples that are universally understood. Avoid references that learners with English as a second language would have difficulty understanding
- Avoid the use of contractions (unless the course is consistently conversational in style)
- Abbreviate when possible without creating confusion, after first spelling out the term, e.g., National Highway Institute (NHI)
- Avoid language and examples that will reduce the shelf life of the courseware (e.g., dates, references to current events)

- Use "select" in learner prompts ("click" or "click on" are not compliant with Section 508 requirements)
- Use a consistent, simple bullet style throughout slides
- Substitute symbols for words (i.e., "$" instead of dollars, "%" instead of percent, etc.)
- Avoid underlines, excessive grid rulings, and unnecessary outlines or graphical borders

Text

- Break up blocks of text to make it easier for learners to scan the content
- Use bold font to emphasize a word or phrase
- Italics should be avoided as they can be difficult to read onscreen. An exception can be made for titles of published works and words appropriated from other languages that have not become Standard English (e.g., *détente*)
- Underlining is reserved for hyperlinks
- Avoid using all capital letters. Learners have more difficulty reading text that is all capitalized than mixed-case letters (and many learners perceive all-cap type as being shouted at)
- Avoid text orphans (one word on a line)

Note: Check the template being used when updating an NHI course. If updating an older course be sure to make the necessary changes to bring the course into conformity by following the current NHI Style and Standards Guide for the course delivery method being used.

Graphics (Illustrations, Photographs, Charts)

- Use colors that accommodate color-blind learners
- Establish and maintain a convention for the use of shade and color to denote meaning; do not use color alone as an instructional cue
- Maintain consistent perspective in any series of visuals
- Be sure that photographs are clear and easily understood. Avoid dark, muddy or indistinct images
- Use graphics that match the text; e.g., a section about bridge construction that discusses a specific highway bridge in Wisconsin should not be accompanied by an image of the Brooklyn Bridge in New York
- Avoid the use of contractor or other corporate logos in the courseware

- Avoid graphics that may become outdated in a short time
- Use graphics that are royalty-free (such as that provided with PowerPoint) or public domain (such as NASA photos and charts). For art that does not belong to NHI, obtain permission to use and cite the source
- Do not use 'cartoon' characters
- All text within the graphic must be readable. If the graphic needs to be scaled down, the capability to expand it must be provided so that all text is readable
- Be consistent with all graphics (with the use of borders, effects and quality)
- Do not use drop shadows
- Make sure there is no advertising or identifying content in the photo (e.g., car model name, billboard signs, license plates). Have your graphic artist blur such content if applicable

Audio

- Use audio as appropriate to add instructional value
- Provide text that matches audio script verbatim accessible to hearing-impaired users and as part of any Instructor or Facilitator guides or support materials
- Use sound effects only when they help to convey the content

Video

- Use video to reinforce, clarify or emphasize a specific behavior or performance objective that cannot be effectively taught using graphics, stills, photographs or animation.
- Video must be captioned to comply with accessibility requirements

Animation

- Do not use any special effects that detract from learning
- Use special effects when required for emphasis or transition
- Use animation to display concepts that are difficult to describe in text
- Ensure that assistive technology for the blind can effectively manage animations
- Do not use blinking graphics or text

Grammar

Abbreviations and Acronyms

- Abbreviations should be used when using titles before and after names; e.g., Mr., Mrs., Ph.D., Col.
- Abbreviations should be spelled out in the first instance; e.g., National Highway Institute (NHI)
- Abbreviations should be used for mathematical measurements; e.g., lb., kg.
- Acronyms do not include spaces or periods
- To introduce an acronym for the first time in a section, write out the full name of the entity, followed by its acronym in parentheses
- Email is an abbreviation of electronic mail. It is commonly abbreviated both as email and as e-mail. In NHI courseware it will be written as email – no hyphen
- File extensions shall be in lowercase, e.g., .jpg, .gif, .doc.

Em Dash, En Dash

An **em dash** is the same length as a small letter "m." It is used within or at the end of a sentence to set off a nonessential element.

Example:

- There are three basic variables—time, wick drain spacing, and surcharge—that can be manipulated to achieve a desired result from Equation 1

An **en dash** is the same length as the small letter "n." It is used to connect two related elements.

Examples:

- 2003-2004
- pp. 28-72

Capitalization

- In headlines, capitalize all words except definite/indefinite articles, prepositions and conjunctions that are shorter than four letters
- When using bullets, capitalize the first word contained in each bullet

- Capitalize the word "State" whenever referring to one of the 50 States
- Capitalize the word "Federal" and "Government" as in Federal Government when used together or alone
- Do not capitalize the word "federally"
- Be wary of unnecessary capitalizations. Unless the text refers to specific legal or official roles, terms such as "contractor" and "agency," need not be capitalized. Terms like "quality," "attribute," and "sample" are ordinary words and should be treated as such. To capitalize these terms unnecessarily dilutes the impact of all capitalized terms in the presentation

Emphasis
- Use emphasis sparingly to introduce key concepts or important terms
- Avoid excessive use of bolding or all capitals. It can decrease readability.
- Use italics only for citations. They can be hard to read on the screen.
- Use underlining only for a hyperlink
- Use quotation marks only for setting off quotations
- Use headings and subheadings to draw attention to specific concepts
- Break up blocks of text to make it easier for the learner to scan the content
- Use learning objects and page elements to engage learners and focus on specific details of information

It's, Its and Other Confusing Terms
It's, Its
It's is a contraction. It is short for "it is" (or occasionally for "it has").

"It's" is not a way to ascribe a property to some "it". While that usage might make sense given that the general rule for forming a possessive is to tack on an apostrophe "s": cat's cradle, Bob's hat; "it's" is an exception to this rule.

Examples:

- It's a small world, after all.
- It's a long, long road to Tipperary.

Its is a possessive pronoun. The interpretation is "that which belongs to it", where **it** stands for some previously defined object.

Examples:

- The dog could walk on its hind legs.

- Love rears its ugly head.

With practice, it's easy to tell these two words apart. To help you keep them separate, here are some tips:

Try replacing "it's" with "it is" in the sentence. If the sentence becomes obviously wrong, you should use "its".

Examples:

- "Nothing can take it's place" can't be right, because "Nothing can take it is place" is nonsense. The correct usage would be: "Nothing can take its place".

but

- "It's not easy being green" is correct, because presumably **it is** not easy.

Try replacing "its" with "his" in the sentence. If it sounds right, "its" is correct.

Example:

- "That's just its way of making friends" is correct, because "That's just his way of making friends" is grammatical.

In general, **its** as a possessive can be used the in the same way as **his**.

Farther, Further
The words **farther** and **further** are often confused.

Both refer to distance and both are based on the word **far**.

The difference is that farther refers to physical distance, and further refers to symbolic or metaphorical distance. Further can be used at the beginning of a sentence as a transition word, and it can mean "in greater depth" or "to a greater extent."

Here are some examples of correct usage:

- I do not want to discuss this any further.
- I drove farther in one day than I ever have before.

Remember that **farther** refers to a far distance, and all other uses are **further**.

Toward, Towards

These are easier to deal with than **further** and **farther**, because there is no difference between toward and towards. The choice of adding an **s** or not is just a matter of style. **Toward** is American standard usage, and **towards** is British. See Internationalization Issues.

For publications and business writing in the United States, use toward. Follow the same pattern for eastward, westward, backward, and all other direction words ending in -ward.

Because

A frequently asked question is: Can you start a sentence with **because**? Yes, if you make sure it is a complete sentence.

One clause beginning with the word **because** does not constitute a sentence. These are fragments:

- Because the newspapers reported it.
- Because the river ran dry.

These are complete sentences:

- Because the newspapers reported it, the neighbors believed it.
- Because the river ran dry, the dam would no longer provide electricity.

You could correct fragments like the ones above by rewriting so that "**because**" is not at the beginning:

- The neighbors believed the story because the newspaper reported it.
- The dam would no longer provide electricity because the river ran dry.

"If I was" or "If I were…"

When you use indicative statements, you are talking about facts or asking about facts, like this:

- Stating a fact: I was home yesterday morning.

- Asking about a fact: Was I there when you called?

In both of these sentences, you use the verb was with I. They are both singular. When you are supposing the impossible, however, you use a plural verb, were, with the singular I, like this:

- If I were a rich man, I'd see my wife, my Rosie, looking like a rich man's wife.

This, of course, is a quote from a song in the musical *Fiddler on the Roof*. You cannot always trust popular songs to use correct grammar, but this one does. In this scenario, the man singing this song is not rich. He is never going to be rich. He is supposing the impossible. Here are some other examples of supposing the impossible or supposing something that is known to be untrue:

- If I were you, I'd order the steak. (I am supposing the impossible – I can't be you.)

- If I were home today, I'd take a nap after lunch. (I am supposing something that is known to be untrue – I am not home today, I know for a fact that I am not, and to suppose it is to suppose something that is not true.)

If you are supposing the impossible or something you know is untrue, use **if I were** like the song. Otherwise use **if I was**.

I.E. and E.G.
When you mean "for example," use **e.g.** It is an abbreviation for the Latin phrase *exempli gratia.* When you mean "that is," or "in other words," use **i.e.** It is an abbreviation for the Latin phrase *id est*.

Either can be used to clarify a preceding statement; the first by example, the second by restating the idea more clearly or expanding upon it. Because these uses are so similar, the two abbreviations are easily confused.

Examples:

- Choose a color, e.g., blue.
- That great American holiday, i.e., Thanksgiving, is almost upon us.

With either one, remember to

- Use a period after each letter. They are abbreviations
- Either abbreviation can be used to begin a sentence; remember to follow with a comma

- Either abbreviation can be used in a parenthetical statement; again, remember to follow with a comma
- If using within the sentence, and not at the beginning or in parentheses, always precede and follow with a comma

Lists

- No sub-bullets or sub-numbers should be used on PowerPoint slides
- Sub-bullets or sub-numbered lists can be used in other instructional materials (i.e. Instructor & Facilitator Guides, Participant Workbook, Reference Manual)
- Use a colon at the end of an introductory sentence that is followed by a series of phrases or terms emphasized in list form with bullets
- Use numbers where sequence is important; otherwise, use bullets
- Begin sentences with caps and end with periods
- Begin phrases (bulleted items that are not complete sentences) with caps and end without punctuation
- Be consistent within a list: either every entry is a phrase, or every entry is a sentence

Irregular Verbs

Irregular verbs do not follow the normal pattern of English verbs. Regular verbs follow the pattern of adding **-ed** to create the past and the past participle (used with have or has) forms, like this:

- **walk**
- **walked**
- **have walked**

Irregular verbs have different spellings in the past and past participle forms:

For the verb "to eat":

- **eat**
- **ate**
- **has eaten**

For the verb "to go":

- **go**
- **went**
- **has gone**

For example, the verb "to prove" is irregular. It may be unclear whether **proved** or **proven** is the correct past participle in this sentence:

- This approach to pavement preservation has **proved/proven** effective.

In this example, **proven** should be used as an adjective and **proved** should be used as a verb:

- This approach to pavement preservation has **proved** effective.

- The **proven** approach to pavement preservation is used most often.

Adding to the confusion surrounding irregular verbs is the fact that British and American usages differ on some, such as get, got, has gotten (American) vs. get, got, has got (British).

Over time some irregular forms have fallen into disuse, like cleave, clove, has cloven. The correct use today is regular: cleave, cleaved, has cleaved. But the old word cloven is still used as an adjective, as in the phrase "some animals have cloven hooves."

Internationalization Issues

NHI works with agencies outside the U.S., so it is important to be conscious of international differences.

British and American usages differ on some irregular verbs, such as get, got, has gotten (American) vs. get, got, has got (British).

Toward is American standard usage, and **towards** is British.

For publications and business writing in the United States, use toward. Follow the same pattern for eastward, westward, backward, and all other direction words ending in -ward.

Some other words that have different American versus British spellings are:

- color v. colour
- gray v. grey
- neighborhood vs. neighbourhood

Writers who read both American and British publications and literature sometimes choose the wrong one. A spelling check will fix some, but not all, of these words.

With regard to big numbers, note that **billion** represents a thousand millions in American English, but a million millions in many European languages.

Time and dates are often handled differently in international settings. U.S. civilian agencies like NHI use 12-hour (civilian) notation.

Example:

- 9:00 a.m., January 2, 2004

Military organizations and international partners will often use 24-hour (military) notation.

Example:

- 0900, 2 January 2004

Note that standard British usage will be common in regions that have historically had substantial British influence. This includes many Middle Eastern, Caribbean, and African nations.

Slashes

The slash, stroke, or solidus "/" is often used in code, to separate elements of dates, to indicate division (i.e., one divided by five or 1 / 5, or in fractions. It is less often used to contract a word, such as "w/out" in place of "without."

Use with care. An incautiously placed slash in the content of an HTML document can break the page.

Do not use spaces around the slash.

Numbers

Individual numbers

Use figures to express the numbers 10 and above, and all numbers representing mathematical functions or quantities, dates, ages, time, money.

- Spell out the numbers nine and below unless they represent precise measurement
- Spell out any number that begins a sentence, title, or heading in print content

- Use numerals even when the number is the first word in a sentence or bullet point in online or PowerPoint content
- To pluralize a number, add "s" or "es," without an apostrophe

Big numbers

Use numerals for big numbers up to one billon:

- "2,000,000" is better than "two million."
- "Two trillion" is better than "2,000,000,000,000" because it is difficult to interpret that many zeros.

As a compromise, you can often use numerals for the significant digits and write out the magnitude as a word. For example, write "24 billion" (not "twenty-four billion" or "24,000,000,000").

- Spell out numbers that don't represent specific facts.

As an example of the latter, if we say "we have served thousands of users," it's better to write "thousands" as a word than to write "1,000s." "Thousands" is not really data in this context; it's intended to give an idea of the scope of our work. On the other hand, it's better to use numerals when stating the exact number (e.g., "we have served 20,692 users"). Disclosing the exact number also increases the statement's credibility.

In addition to spelling out extremely big numbers, you might also need to explain them if you write for a non-scientific audience. You might, for example, say that a trillion is a thousand billions.

Usability is the main concern – always use the approach that suggests the smoothest path for the end user.

Numbers in series

When 2 or more numbers appear in a sentence and 1 of them is 10 or larger, figures are used for each number.

Examples:

- Each of 15 major commodities (9 metal and 6 nonmetal) was in supply.
- Petroleum came from 16 fields, of which 8 were discovered in 1956.
- That man has 3 suits, 2 pairs of shoes, and 12 pairs of socks.

but

- Each of nine major commodities (five metal and four nonmetal) was in supply.
- Petroleum came from nine fields, of which eight were discovered in 1956.
- That man has three suits, two pairs of shoes, and four hats

.

Measurements
- 7 meters
- about 10 yards
- 8 by 12 inches

but

- tenpenny nail
- three-ply
- seven-story building

Percentage
- 12 percent; 25.5 percent; 0.5 percent (or one-half of 1 percent)
- thirty-four one hundredths of 1 percent
- 50-50 (colloquial expression)

Proportion
- 1 to 4
- 1-3-5
- 1:62,500

Unit modifiers
- 5-day week
- 5-foot-wide entrance
- 20th-century progress

but

- two-story house
- five-member board
- $20 million airfield

Ordinal Numbers

Except as indicated above, and also for day preceding month, figures are used in text and footnotes to text for serial ordinal numbers beginning with 10th. In tables, footnotes to tables, and in sidenotes, figures are used at all times. Military units are expressed in figures at all times when not the beginning of a sentence, except Corps. (For ordinals in addresses, see below.)

- fifth ward; 12th ward
- first grade; 11th grade
- 7th Fleet

but

- XII Corps (Army usage)
- Court of Appeals for the Tenth Circuit
- Seventeenth Decennial Census (title)

When ordinals appear in juxtaposition and one of them is 10th or more, figures are used for such ordinal numbers.

- This legislation was passed in the 1st session of the 102nd Congress.
- He served in the 9th and 10th Congresses.
- From the 1st to the 92nd Congress.

but

- The district comprised the first and second precincts.
- He represented the first, third, and fourth regions.
- The report was the sixth in a series of 14.

Ordinals and numerals appearing in a sentence are treated according to the separate rules dealing with ordinals and numerals standing alone or in a group.

- The fourth group contained three items.
- The fourth group contained 12 items.
- The 8th and 10th groups contained three and four items, respectively.

Beginning with 10th, figures are used in text matter for numbered streets, avenues, etc. However, figures are used at all times and street, avenue, etc. are abbreviated in sidenotes, tables, and footnotes to tables.

- First Street NW; also in parentheses: (Fifth Street) (13th Street);

- 810 West 12th Street
- North First Street

A spelled-out number should not be repeated in figures, except in legal documents. In such instances use these forms:

- five (5) dollars, not five dollars (5)
- ten dollars ($10), not ten ($10) dollars
- three (3) copies of the contract, not three copies of the contract (3)

Numbers appearing as part of proper names, used in a hypothetical or inexact sense, or mentioned in connection with serious and dignified subjects such as Executive orders, legal proclamations, and in formal writing are spelled out.

- in the year nineteen hundred and eighty-four
- the One Hundred and Sixth Congress
- back to square one

Time and Money
- If space is not critical, write out the date in full (e.g., January 2, 2004); if space is an issue, use slashes (e.g., 1/2/04).
- Use a colon to separate the hours and minutes (e.g., 9:00 a.m.).
- Use 12-hour, MMDDYYYY, (civilian) notation (9:00 a.m., January 2, 2004) rather than 24-hour, DDMMYYYY, (military) notation (0900, 2 January 2004) for time and dates.

  Caveat: international partners will often use 24-hour, military-style notation.

Examples:

- 6 hours 8 minutes 20 seconds
- 3 fiscal years; third fiscal year
- 1 calendar year

but

- four centuries
- four afternoons
- one-half hour

- $3.65; $0.75; 75 cents; 0.5 cent
- $3 (not $3.00) per 200 pounds
- 75 cents apiece

but

- two pennies
- three quarters
- one half

Dates

- June 1985 (not June, 1985); June 29, 1985 (not June 29th, 1985)
- March 6 to April 15, 1990 (not March 6, 1990, to April 15, 1990)
- 4th of July (but Fourth of July, meaning the holiday)

In referring to a fiscal year, consecutive years, or a continuous period of 2 years or more, when contracted, the forms 1900-11, 1906-38, 1931-32, 1801-2, 1875-79 are used (but upon change of century, 1895-1914 and to avoid multiple zeroes together, 2000-2001). For two or more separate years not representing a continuous period, a comma is used instead of a dash (1875, 1879); if the word from precedes the year or the word inclusive follows it, the second year is not shortened and the word to is used in lieu of the dash (from 1933 to 1936; 1935 to 1936, inclusive).

In dates, A.D. precedes the year (A.D. 937); B.C. follows the year (254 B.C.).

A unit of measurement, time, or money, which is always expressed in figures, does not affect the use of figures for other numerical expressions within a sentence.

- Each of the five girls earned 75 cents an hour.
- A team of four men ran the 1-mile relay in 3 minutes 20 seconds.
- The contractor, one engineer, and one surveyor inspected the 1-mile road.

but

- There were two six-room houses, three four-room houses, and four two-room cottages, and they were built by nine workers in thirty 5-day weeks.

Serial Numbers

Figures are used for items numbered in a series.

- Bulletin 725
- Document 71
- pages 352-357

Decimals

In text a zero should be supplied before a decimal point if there is no whole unit, and ciphers should be omitted after a decimal point unless they indicate exact measurement.

- 0.25 inch; 1.25 inches
- specific gravity 0.9547
- gauge height 10.0 feet

but

- .30 caliber (meaning 0.30 inch, bore of small arms); 30 calibers (length)

Degrees

- longitude 77 deg.04′06″ E. 35 deg.30′ N.
- an angle of 57 deg.
- 25.5′

but

- 12 degrees of freedom
- 32nd degree Mason
- 150 million degrees Fahrenheit

Mathematical expressions

- multiplied by 3
- divided by 6
- a factor of 2

Indefinite expressions

Indefinite expressions are generally spelled out.

- the seventies; the early seventies

but

- the early 1870s or 1970s

additionally

- in his eighties, not his '80's nor 80's
- between two and three hundred horses (better between 200 and 300 horses)
- twelvefold; thirteenfold; fortyfold; hundredfold; twentyfold to thirtyfold

but

- 1 to 3 million
- mid-1971; mid-1970s
- 40-plus people

Words such as **nearly**, **about**, **around**, **approximately**, etc., do not reflect indefinite expressions.

- The bass weighed about 6 pounds.
- She was nearly 8 years old.

Fractions

Mixed fractions are always expressed in figures. Fractions standing alone or if followed by **"of a"** or **"of an"** are generally spelled out.

- Write out "three-fourths of an inch"; do not represent this as "¾ inch" nor as "¾ of an inch."
- "one-half of a farm"; not "½ of a farm"
- one-half inch

but

- ½ -to 1 ¾ pages
- ½ -inch pipe
- ½ -inch-diameter pipe

Fractions (¼, ½, ¾, 3/8, 5/8, 7/8, 1/2954) or full-sized figures with the slash (¼, 1/2954) may be used only when either is specifically requested. A comma should not be used in any part of a built-up fraction of four or more digits or in decimals.

Fractions are used in a unit modifier.

- ½ -inch pipe; not one-half-inch pipe
- ¼-mile run
- 7/8-point rise

Writing Clear Learning Outcomes

Learning outcomes state what the instructor expects participants to learn as a result of the specific lesson being taught. They allow both instructor and participant to verify their comprehension of the content presented. Learning outcomes must be written as observable and measurable performance. Below are the six major levels of Bloom's Taxonomy of the Cognitive Domain. NHI uses Bloom's Taxonomy for guidance to write learning outcomes.

The Six Major Levels of Bloom's Taxonomy of the Cognitive Domain
(with representative behaviors and learning outcomes)

I.   **Knowledge.** Remembering information

Define, identify, label, state, list, match

- Identify the standard peripheral components of a computer
- Write the equation for the Ideal Gas Law
- Identify the five major prophets of the Old Testament

II. **Comprehension.** Explaining the meaning of information

Describe, generalize, paraphrase, summarize, estimate

- In one sentence explain the main idea of a written passage
- Describe in prose what is shown in graph form
- Translate the following passage from *The Iliad* into English

III. **Application.** Using abstractions in concrete situations

Determine, chart, implement, prepare, solve, use, develop

- Using principles of operant conditioning, train a rate to press a bar
- Apply shading to produce depth in drawing
- Derive a kinetic model from experimental data

IV. **Analysis**. Breaking down a whole into component parts

Points out, differentiate, distinguish, discriminate, compare

- Compare and contrast the major assumptions underlying psychoanalytic and humanistic approaches to psychology
- Identify supporting evidence to support the interpretation of a literary passage
- Analyze an oscillator circuit and determine the frequency of oscillation

V. **Synthesis**. Putting parts together to form a new and integrated whole

Create, design, plan, organize, generate, construct

- Write a logically organized essay in favor of euthanasia
- Develop an individualized nutrition program for a diabetic patient
- Compose a choral work using four-part harmony for men's and women's voices

VI. **Evaluation**. Making judgments about the merits of ideas, materials, or phenomena

Appraise, critique, judge, weigh, evaluate, select

- Assess the appropriateness of an author's conclusions based on the evidence given
- Select the best proposal for a proposed water treatment plant
- Evaluate a work of art using appropriate terminology

You may also use the following verbs to assist you in writing clear learning outcomes:

To measure *knowledge*, use—	To measure *comprehension*, use—	To measure *application*, use—	To measure *analysis*, use—	To measure, *synthesis*, use—
Classify	Compare	Apply	Appraise	Argue
Define	Contrast	Assess	Analyze	Arrange
Describe	Describe	Choose	Break down	Assemble
Label	Discuss	Construct	Calculate	Collect
List	Explain	Demonstrate	Categorize	Combine
Measure	Express	Dramatize	Compare	Compose
Memorize	Formulate	Employ	Conclude	Conclude
Name	Identify	Explain	Contrast	Construct
Recall	Indicate	Find	Criticize	Create
Record	Judge	Illustrate	Debate	Derive
Recognize	Justify	Interpret	Diagram	Design
Relate	Locate	Operate	Differentiate	Discuss
Repeat	Name	Perform	Distinguish	Formulate
Reproduce	Report	Practice	Examine	Generalize
Select	Represent	Predict	Experiment	Manage
State	Restate	Schedule	Identify	Organize
Underline	Review	Select	Inspect	Plan
Write	Select	Show	Inventory	Prepare
	Tell	Use	Justify	Propose
	Translate		Question	Relate
			Resolve	Restate
			Select	Select
			Separate	Set up
			Solve	Summarize
			Test	

Accessibility and Section 508

Courses must be accessible to persons with disabilities in accordance with Section 508 of the Rehabilitation Act Amendments of 1998. Proposals should address how the course would meet the requirements of this Act.

The Contractor will coordinate with the Contracting Officer's Technical Representative (COTR) for overall technical direction. The COTR will convene designated U.S. Department of Transportation (USDOT) staff to serve as technical experts, and assist in the review and approval of course materials. Technical experts will represent USDOT, as appropriate.

The Final Rule, Electronic and Information Technology Accessibility Standards, published in the Federal Register on December 21, 2000, provides guidance on how a Contractor can meet these requirements (see, 36 CFR Part 1194 [Docket no. 2000-01] RIN 3014-AA25). There are also a number of readily available resources on the Rehabilitation Act including several web sites. See, for example, www.section508.gov and www.access-board.gov.   Additionally, a number of organizations provide technical information on making websites accessible for the disabled. Such organizations include but are certainly not limited to:

- The Web Consortium (www.w3.org).
- The HTML Writers Guild (www.hwg.org).
- The Rochester Institute of Technology's Equal Access to Software and Information website (www.people.rit.edu/~easi/).
- The University of Wisconsin-Madison's Trace Research and Development Center (www.trace.wisc.edu)

See also:
- Janet L. Balas. Online Resources for Adaptive Information Technologies, Computers in Libraries (June 1, 1999).
- Marilyn J. Cohodas. Does Barrier-Free Compute? Governing Magazine (April, 2000).

The requirements for Web-based applications as described in § 1194.22 the December 21, 2000 Final Rule can be found in Appendix B (NHI Web-based Training Standards). You may also find additional information regarding Web-conference training in Appendix C (NHI Web-conference Training Standards).