

MECHANICS STANDARDS IN ENGINEERING WRITING

The following list reflects the most common grammar and punctuation errors I see in student writing. Avoid these problems when you write professionally.

GRAMMAR AND SENTENCE STRUCTURE

Along with writing precisely and concisely, make sure you use appropriate and correct grammar and sentence structure.

The tense and voice of the thesis*

Engineering writing uses both passive voice and past tense (unlike literary writing). Use past tense, passive voice to discuss your own work. Use past tense, active voice to discuss the work of others:

TOO PERSONAL: I measured the strain.
ENGINEERING APPROPRIATE: The strain was measured.

TOO LITERARY: The researcher discusses his measuring of the strain.
ENGINEERING APPROPRIATE: The researcher measured the strain.

AVOID THIS TYPE OF CONSTRUCTION: Measuring the strain resulted in a . . . It's too easy to say something you don't mean— the act of measuring did not cause a result.

Dangling modifiers

Here is the classic example to help you avoid dangling modifiers:

Running down the street, the building was on fire. (The introductory phrase applies to the first subject noun—the building.)

Here are two more:

After breaking my back, my doctor told me not to work so hard.
I saw deer, riding bikes in the park.

Ending sentences with prepositions and splitting infinitives

Previous generations were taught that both of the above practices were grammar sins. Modern grammarians have rejected these rules:

- It is now acceptable “**To boldly go** where no man has gone before” (and split infinitives along the way—*to go* is the infinitive).
- Feel free to share with us the topic you wrote **about** (you don't need to say “the topic *about which* you wrote”)

Note: You may have a manager who insists on the old rules.

* These sections adapted from Deborah Wilhelm's English Paramedic

PUNCTUATION

Punctuation makes writing easier to read. It can also affect meaning. Use it correctly.

Commas

Comma rules vary. Many English teachers will tell you that the final comma in a series is optional. Some style guides say you may skip a comma after an introductory phrase. If your employer has a style guide, use that. If not, always use commas when your reader may misread a sentence:

Use the final series comma to avoid ambiguity —>

WITHOUT THE COMMA: I wish to thank my parents, Britney Spears and Dick Cheney.

Use a comma after an introductory phrase to prevent misreading —>

WITHOUT THE COMMA: As Alfred started eating his cat jumped up on the table. (example courtesy of Diana Hacker)

Use commas to set off information not necessary for identifying a noun (restrictive vs. non-restrictive elements) —>

WITHOUT THE COMMAS: Jane's husband who is twenty-one likes escargot. (omission of commas, while not incorrect, denotes that we need to know which of her husbands we are referring to . . .)

WITH THE COMMAS: My brother, who is 40, works in San Pedro. (Because of the commas, the reader knows I only have one brother.)

Use a comma to divide if-then sentence construction: *Writing* is not a word. If you use it, I will fail you.

Use a comma before a coordinating conjunction when it begins an independent clause (*For, And, Nor, But, Or, Yet, So*—the FANBOYS):

CORRECT: Sometimes my dog barks at squirrels, but other times he just ignores them.

INCORRECT: My dog barks at squirrels, and birds.

Semi-colon*

Use the semi-colon in these situations:

- to separate two independent clauses—that is, sentences that could stand alone but for which you prefer to show a closer connection —>

Writing is not a word. Don't use it. OR *Writing* is not a word; don't use it.

- to separate list items that are long or already have commas in them —>

I walked to the store, the park, and the bank; climbed the big oak, which had the cat in it; and fixed the bicycle, the wagon, and the car. (However, I usually don't recommend writing a sentence of this length.)

Colons to introduce a list

Style guides offer several variants of the rules for introducing a list. **Always** use a sentence or phrase to introduce a list. Here is the simplest rule:

Use a colon at the end of a complete sentence —>

Bring the following to class:

- pens
- notebooks
- calculators

Use no punctuation for a portion of a sentence finished off by the list items (and make sure the grammar flows logically from the intro to the list items) —>

At the meeting, we will discuss

- raises
- expenses
- vacations

List punctuation

You have several choices for punctuating a list. Choose a consistent style to use throughout a document.

Use periods at the end of each item —>

Bring the following to class:

- pens.
- notebooks.
- calculators.

Use no periods at all —>

Bring the following to class:

- pens
- notebooks
- calculators

Use a period only at the end of the list —>

Bring the following to class:

- pens
- notebooks
- calculators.

Hyphens

The rules for using hyphens vary among style guides. Pick a consistent style and use it throughout the document. The following rule, however, does not vary:

Use hyphens only to connect words to words or numbers to words; don't use them in place of bullets or to connect parts of a sentence (despite what you see as the default on *PowerPoint*) —>

INCORRECT: I need to buy the following at the store:

- peas
- pistachios
- pomegranates

INCORRECT: My sister giggles too much-her laughter makes me crazy.

CORRECT: My sister giggles too much—her laughter makes me crazy.
(Notice the double dash or em-dash.)

CORRECT: I have a twelve-year-old sister.

CORRECT: I need to buy the following at the store:

- peas
- pistachios
- pomegranates

Quotations

Always include a quotation as part of a larger sentence. A quote should never stand alone:

CORRECT: Mary Forte says, “Don’t forget to introduce all quotations!”

INCORRECT: “We don’t need no stinking badges!” That’s one of the most famous the movie lines ever.

Do not use quotation marks to indicate emphasis—

I once saw the following on a menu: “Fresh” taco’s. (The restaurant is no longer in business.)

WORD CHOICES

Use precise, standard English. Carelessness with word choice at best can make you look careless; at worst can confuse the audience, say something completely wrong, or make you look less intelligent.

The general you

Avoid the word *you* as a substitute for *people*, *everyone*, or large groups of people. —>

CONFUSING: You should buy in bulk. (me? right now? At Albertson's? Or in general?).

Amount vs. number

Many people use the word *amount* freely in their speech. We have different rules for using it in written English:

Use *number* when you refer to something that can be counted (notice the word *counted* as opposed to *measured*) —>

INCORRECT: We talked to a large amount of people. (Uh . . . did someone put them in a blender?)

CORRECT: We talked to a large **number** of people for this report.

Use *amount* when you refer to something that cannot be counted (or usually isn't) —>

I spilled a large **amount** of sugar on the floor. (However, a precise measurement, say 2 cups, would be the best choice here)

Less vs. fewer

People often use the word *less* instead of *fewer* in their speech. The rules for written English say

Use *fewer* when you refer to something that can be counted —>

We have **fewer** pencils than pens. (The grocery store standard “10 items or less” makes English teachers crazy)

Use *less* when you refer to something that cannot be counted —>

We have **less** asphalt than concrete.

The naked *this* (thank you to Kristen Woolever for this term)

To avoid ambiguity, use the word *this* with a noun.

AMBIGUOUS: John eats worms for breakfast and then cleans the plates. This makes his mother ill. (Which part makes her ill?)

CLEAR: John eats worms for breakfast and then cleans the plates. This diet makes his mother ill.

Note: This rule also applies to *that*, *these*, and *those*.

Source references and other names

The first time you use a person's name, use both first and last: Taylor Smith. Afterwards refer to that person by his or her last name: Smith. (Exceptions: if you are referring to a famous person known by his or her first name (Michelangelo), if you know that person well, or if that person is a juvenile; you may use the first name.)

Mr., Ms., Miss, Mrs., Dr.*

Miss and *Mrs.* are archaic; don't use them unless you are writing to someone who has specifically told you otherwise. Use *Dr.* if you know this title is correct. If you don't know for sure, you can use *Prof.* in academic correspondence.

Gender neutral language

Modern writing no longer uses *he* and *him* as neutral pronouns:

ARCHAIC: Every doctor should have **his** own stethoscope.

BETTER (BUT A LITTLE CLUNKY): Every doctor should have **his or her** own stethoscope.

BETTER: **All doctors** should have **their** own stethoscopes. (pluralized)

BETTER: Every doctor should have **a** stethoscope. (possessive pronoun eliminated)

NOT REALLY AN OPTION: Every doctor should have their own stethoscope. (mixed singular and plural)

Who vs. whom*

Who is a subject pronoun; you can use it where you would use the words *he*, *she*, *they*:

He wrote the proposal → **Who** wrote the proposal?

Whom is an object pronoun; you can use it where you would use the words *him*, *her*, *them*:

The man **whom** they interviewed works for Raytheon. (they interviewed **him**)
(Better yet, say this, "The man I saw yesterday works for Raytheon.")

Firstly, secondly, thirdly*

Don't use them; they sound pompous. *First*, *second*, and *third* work just fine. Make sure if you use the word *first*, you also use the word *second*.

SPELLING

Below you will find a list of words that people frequently confuse and consequently misspell. Except for "*definitely*", the spellchecker usually won't catch these:

Affect vs. effect*

This distinction is subtle, painful, irritating, and so on. Luckily, Deborah Wilhelm has offered an understandable explanation [Forte's comments and bold]:

Effect is a noun, but not always.

Effect (noun) — the result [cause and **effect**]

Effect (verb) — to cause or bring about [**effect** a change—a less common usage]

Affect is usually a verb, but not always.

Affect (verb) — to influence [The budget cuts may **affect** tuition rates at Cal Poly.]

Affect (noun) — a state of emotion (note: this is the least likely use of

the word [ask a psych major])

To know which is correct, substitute in the definition and see if it makes sense:

That movie affected me deeply. —> That movie influenced me deeply. (this makes sense)

That movie effected me deeply. —> That movie caused me deeply. (this does not make sense)

That movie's affect was I could not sleep. —> That movie's emotion was I could not sleep.
(incorrect)

That movie's effect was I could not sleep. —> That movie's result was I could not sleep. (correct)

Definitely vs. defiantly (definAtely is not a word)

I *definitely* want to spell *definitely* correctly; but if I write “definAtely” the spell checker will probably correct it to *defiantly*. —>

Defiantly is how your cat lies on the couch even when you told it to get off. (Picture the smug look in its eyes.)

Everyday vs. every day

Use *everyday* (it's an adjective) to modify a noun: I wore my *everyday* shoes (<— noun) to school.

Use *every day* to indicate when something happens: I ride my bike to school *every day*.

Into vs. in to

I am going to turn this paper *into* my teacher. Then my backpack will be really, really heavy.

I am going to turn this paper *in to* my teacher. She will be happy to get it.

Posses vs. possess

For *posses*, think Westerns: When Curly Bill escaped, we rounded up a couple a' *posses* and hunted 'im down.

For *possess*, think ownership: I *possess* a large number of paperclips.

Supposed to, used to, accustomed to

Those are the correct spellings above. Notice the *-eds* that you often can't hear in speech: I am *supposed to* remember to put the *-ed* at the end of those words, but I'm not *used to* it. So I'm *accustomed to* leaving it off. But now I will change my ways!

Than vs. then*

Than is a comparison —> I'm shorter **than** most of the students in this class.

Then indicates time —> He did his homework. **Then** he went out to play.

Who's vs. whose*

Who's = *Who is*

Whose = possessive pronoun (equivalent to *his, her, their* —> **whose** dog? **their** dog.)