



Faculty of Engineering
and Applied Science

CONVENTIONS OF TECHNICAL WRITING

Writing for engineering is much like writing for any other purpose. However, there are several conventions of technical writing that are not as important or common in other types of writing. The following document lists a variety of rules that apply to the type of writing you will use when writing technical reports for your courses and the workplace.

CONVENTIONS WITH NUMBERS

SI UNITS

The International System of Units (SI) is widely used in technical writing. These SI units are employed when measuring length (metres), time (seconds), and several other common calculations. More information on these units can be found here: [SI Units | NIST](#). All of these units are lowercase when written, but the symbols for some include uppercase letters.

When writing these calculations, put a single space between the digit and the unit of measurement. If the degree symbol ($^{\circ}$) is needed, no space is used.

Ex. The sample was exposed to a 1,375 $^{\circ}$ K propane flame for 30 s.

MONETARY UNITS

Although we say dollars after a number, the dollar sign comes before the numerical value. Confusingly, the cents sign comes after the number. Even more confusingly, the cents are more often displayed using the dollar sign, in which case the dollar sign goes in front, but it would be read as x cents.

Written	Spoken
\$1.62	One dollar and sixty-two cents
62¢	Sixty-two cents
\$0.62	Sixty-two cents

USING UNITS IN TABLES

When possible, units do not go in the main cells of your table. Instead, they are placed in the headers for the columns, in parentheses. You should not have one column with different units of measurement. In the example below, the first column is done incorrectly, while the second is correctly formatted.

Sample	Length	Width (m)
1124.1	47.63"	1.21
1125.1	38.58 inches	0.98
1125.3	2.45 m	1.05

TIME NOTATION

Using the 24-hour clock system avoids ambiguity and potential errors. However, if you are using a 12-hour clock, the a.m. and p.m. should be separated from the time by a single space. Other variations exist, such as AM and PM, but the lowercase using periods is the most widely accepted version. Remember, if using the 24-hour clock, neither a.m. nor p.m. is needed.

NUMBERING PAGES/SECTIONS/TABLES/FIGURES

In most reports, page numbering begins with the introduction, which is assigned page number 1. Any pages before that (for example, a cover page or an abstract) are numbered sequentially using Roman numerals.

The introduction is often the first numbered section. In a basic document, each major section is numbered sequentially, but in a more complex document, subsection numbering may be required. This is done using decimal points, so section 1 (or 1.0) might have subsections 1.1 and 1.2. In 1.1, there might be three subsections, 1.1.1, 1.1.2, and 1.1.3. An example of this is available here: [FormattingMSWord.pdf \(mun.ca\)](#).

Tables and figures are similarly numbered. If there are only a small number in your document, you can number each sequentially, giving tables and figures their own sets of numbers. There can, for example, be both a Table 1 and a Figure 1. In a document with more tables/figures, you might want to number them according to where they are in the document. The first table in section 2.1 would be Table 2.1.1. The next would be 2.1.2. There might not be a Table 3.x if there are no tables in the third section. Again, figures and tables are numbered separately. Also, table numbers are located in their title, which goes above the table. Figure titles are located in the figure title, which is located below the figure.

CONVENTIONS WITH WORDS

USE OF CONTRACTIONS

Simply put, contractions do not appear in technical documents. Common examples of contractions include don't, can't, and won't. Instead use "do not," "cannot," and "will not." Using contractions is a more informal way of writing (representing how one speaks), so it should not be used in technical documents.

USE OF ACRONYMS

Acronyms and other similar abbreviations should only be used after the full form of the word has been written and the acronyms listed immediately afterward. Subsequently, every attempt should be made to not use the full form of the word in the body of the report.

Ex. The water will be treated using reverse osmosis (RO). The benefits of RO purification include...

WRITING NUMBERS

The general rule is to use letters to represent numbers below 10, and to use digits to represent any number 10 or greater. One exception to this is at the beginning of a sentence, which should be written in letters regardless of the number. If the number is considerably large, try rewriting the sentence so that the first word is not a large number. Conversely, when writing calculations or precise figures, use digits instead of letters.

CONVENTIONS WITH PUNCTUATION

SERIAL COMMA

Also known as the Oxford comma, the serial comma is used when there is a list of more than two items. The serial comma is placed between the second-to-last and last item in a list, preceding the word *and*. It is used to increase the clarity between the items. Many experts consider it a good idea to use the serial comma, and if using it in a document, it must be used consistently rather than only sometimes. In the examples below, the first is clearly more confusing than the second. The serial comma eliminates the confusion.

***Ex.** Current British Overseas Territories include Anguilla, Gibraltar, Turks and Caicos and Montserrat.

Ex. Current British Overseas Territories include Anguilla, Gibraltar, Turks and Caicos, and Montserrat.

COLON

Colons are often misused in technical documents. Strictly speaking, a colon should only follow what could be a full sentence. Below are two examples of colons being used to introduce a list. The first is incorrect, and the second is correct.

***Ex.** Current British Overseas Territories include: Anguilla, Gibraltar, Turks and Caicos, and Montserrat.

Ex. Four British Overseas Territories are located in the Caribbean: Anguilla, British Virgin Islands, Cayman Islands, and Montserrat.

SEMICOLONS

Semicolons have two common usages in technical writing. First, they can separate two complete ideas (that could qualify as full sentences) that have a clear relationship in meaning. Often, but not always, a connecting word is also used between these two ideas.

Ex. Creative Technology was a major player in the development of digital music; however, today their role in this area is mostly limited to manufacturing sound cards for computers.

In lists, semicolons are used when the items in the list are more complex than normal because of their length or punctuation within them. They replace commas in these situations.

Ex. Creative Technology maintains offices in the following places: Shanghai, China; Tokyo, Japan; Dublin, Republic of Ireland; Singapore; and Silicon Valley.

HYPHENS AND DASHES

A hyphen's *only* use is to connect two (or more) words to make a single word. These words all modify a single word, which is either the first or last word in the compound.

Ex. The new wind-powered turbine will generate electricity for the quickly growing town.

In the example above, note that the turbine is a "wind-powered" one. By definition, all turbines must be powered to function, so you would never say a "powered turbine" on its own. By contrast, the example says "quickly growing" rather than "quickly-growing." This is because the city could also be described as a "growing" city. "Quickly" simply describes how it is growing, so no hyphen is needed.

When what would be a compound adjective comes after the noun, hyphenation is rarely needed.

Ex. If a load-bearing wall is found, it should not be removed until the wall is no longer load bearing.

Hyphens are used in some compound nouns, such as *editor-in-chief*. They are also used with some numbers, especially in situations where the number is used to modify the following noun.

Ex. A six-year-old child just gave a 15-minute-long presentation on renewable energy.

In situations where words are not being joined to create a single word, the punctuation is most likely a dash rather than a hyphen. The longer type of dash, the em dash (—), can be used to introduce a list as a replacement for a colon. It can also replace commas and parentheses in cases where the normal punctuation would be confusing or awkward. It is unlikely that a technical report will contain an em dash.

The en dash (–), on the other hand, is very common in technical reports. It is used when giving a range of numbers. It is slightly longer than a hyphen, but the difference might not be noticeable to some readers.

Ex. Samples 11–20 were refrigerated at 1.5°C between 8:00–11:45.

EMPHASIZING WORDS

In most cases, you should avoid using quotation marks for emphasis. Quotation marks should only be used when talking about words that were actually said or exact word usage. Instead, it is recommended that italics be used to emphasize a word or phrase, but even italics should be used sparingly. Reserve their usage for situations where you think the reader might miss the point otherwise. Rewriting the sentence so that the emphasized point is more prominent is always preferable.

Ex. The mixture should only be shaken *after* it has been heated to more than 40°C.

Ex. After the mixture has been heated to 40°C, it should be shaken.