

Writing Reports in Engineering and Science AND Appendix A: Additional Resources on Writing Reports

- Film 0
 - Communication is important, so you can convince other people.
- Film 1
 - When writing reports keep in mind of different audiences with introductions and also the purpose of the report
 - Different parts of the report are targeted at different audiences.
 - Why are the audiences reading that paper?
- Film 2
 - Different types of documents have different levels of persuasion.
 - Interest of audience can differ from person to person.
 - Level of Persuasion can affect the audience.
 - Style matters in paper to specify level of persuasion.
 - Proposals are primarily arguments.
 - Different designs and concepts on a single paper need to be explained.
- Film 3
 - The length, formality, and formality are all part of the occasion.
 - Longer documents do not imply higher quality.
 - Technical document readers are time-pressed and prefer clear information.
 - Maximum word and page counts are required in engineering.
 - Engineering documents are written in a more formal manner and strictly defined.
 - Format is affected by text which is emphasized by whitespaces in a report.
 - There is no universal format so follow the one given by your professor or manager.
 - Formatting matters and following all three principles can help you in formatting.
- Film 4
 - Every report should have 3 sections, front, main and end sections.
 - The front contains title and abstract.
 - Main contains introduction procedures, ... to results and conclusion.
 - The end should have references and appendix.
 - Four questions – Scope, Importance, Background and Arrangement
 - The order of these answers matters too.
 - Reference listing helps readers find citations.
- Film 5
 - Sections are meant to give breaks or bookmarks to readers.
 - Providing clear titles helps the viewer to look for a certain section and provides a sense of structure.
 - Every section should have an introduction to explain the section and any other subsections.
 - Names of different sections in a paper should be similar to each other.
- Film 6
 - How to begin a section?
 - The first sentence of each section orients the reader to the paper.

- You shouldn't start a section with "This paper presents."
- Familiar-→ new
- A good first sentence of each section can explain the section for the first-time readers.
- First sentences can waste the emphasis given to a section.
- Film 7
 - What are the two most important goals in scientific writing?
 - Writing in engineering should be precise and clear.
 - Explain one idea in a single sentence.
 - Use simple language in your paper to explain things.
 - Avoid unnecessary complexity.
- Film 8
 - Ambiguity is a word, phrase or sentence that can be read in more than one way.
 - Place a comma after an introductory phrase or clause.
 - Specify the standalone this, place a noun or defining pronoun after that.
- Film 9
 - Four expectations do audiences have for the incorporation of an illustration in engineering.
 - Writing will not be effective if sentences do not connect with each other.
 - Begin each introduction sentence with a participial phrase or correlative conjunction.
 - Explain the illustration before you show it.
 - Connect the ideas between the previous and next sentences.
- Film 10
 - Some Reports are mostly focused on illustrations like tables and figures.
 - Name each illustration depending on sections like for appendix or when showing results.
 - Again, Explain the illustration before you show it.
 - So, the reader understands the illustration when they see it.
 - Equation is a part of the paragraph and is not an illustration.
 - An equation is grammatically part of a sentence in a paragraph.
- Film 11
 - The process of writing has planning drafting revising and proofreading.
 - Outline can help in writing the paper.
 - Drafts can help revise and make the work easy.
 - There are different strategies while writing paper in a group.
 - Always proofread the document before submitting or publishing
 - Give the paper the eye check and see if the document has proper formatting and is consistent in line spaces and format.
- Film 12
 - Grammar is important in engineering as it helps us understand the paper.
 - While reading paper, grammatical errors can cause confusion which can harm the credibility of the author.

Avoiding Errors of Grammar, Punctuation, and Usage Commonly Made in Engineering and Science

Section 1 - Grammar

Film 1

Simple Sentence: A simple sentence is defined as a group of words with a verb and a subject. There are 8 parts of speech in total while the film explains nouns, pronouns, and verbs. A noun is a word that refers to a person, place or a thing.

Film 2

Pronunciations are of three types: first person pronouns, second person pronouns and third person pronouns. A verb is a word that describes an action or a state of being. The film later explains with examples that a subject and a verb together with other words are required to make a 'complete thought' and that it makes a full sentence.

Film 3

Avoiding run-ons: This film explains a run-on which enlightens how two or more sentences are sometimes joined in an incorrect manner. It also teaches how to shorten sentences as much as possible with appropriate conjunctions and punctuation.

Film 4

Maintaining parallelism: The film explains parallelism which refers to the use of similar words that help us maintain the sentence and grammatical structure of the sentence. The key to parallelism is the use of same grammatical words while mentioning them together in a sentence, that is, to use all nouns or all verbs in a sentence and not mix them up. Conjunctions can be used as 'couples' in a sentence to make my writing remarkable without making it sound complicated.

Appendix

Avoiding misplaced modifiers: The film went through misplaced modifiers which is a word or a phrase that is separated incorrectly from the content it describes in the sentence. This can be fixed using adjectives or adverbs using them close to the content it describes, generally next to it.

Section 2 – Punctuation Diagnostic

Film 5

The use of commas in science is different from general writing for literature and poetry. There are three rules for using a comma; One being to use it to separate introduction and phrase in a sentence. Some words such as conjunction adverbs (therefore and however) also require a comma right next to it too.

Film 6

Second is that we must not use a single parenthetical between a verb and a subject. As an example, given in the film, sometimes, two commas serve as a parenthesis. Third rule explains on how to use commas for a series of three or more items only when they are correlated. When there are three items only United States and Europe have different methods of punctuation, where United States is required to have a comma after the last item where writing in Europe doesn't require it.

Film 7

Colons: Colons are used to introduce lists or equations in scientific writing and that the line before the colon should be a proper sentence itself. At the end of the phrase after a colon only a period can be used to finish the sentence.

Film 8

dash: dash is not supposed to be very frequent. Depending on the situation, the dash can replace commas, parentheses, or colons. A dash is not a hyphen, and we can differentiate them as the dash is the length of the letter m.

Film 9

Semi-colons: A semicolon can be used to separate distinct sentences connected by words like conjunction adverbs. We have to make sure the two sentences are also parallel in structure. Semi-colons are not generally used to join sentences as it makes the writing longer in science but instead, they are preferable to use to join different items.

Section 3 – Usage

Film 10

As an engineer, you should examine two subject-verb cases that often cause agreement errors in scientific writing. One case involves a singular subject noun followed by a prepositional phrase. The cause of agreement errors in science engineering arises from technical words. Verb agreement matters a lot. Verb tense poses a challenge to engineers because selecting different tenses in different paragraphs might confuse the reader a lot. Most papers do not use future tense that much.

Film 11

Expressing numbers on paper is confusing, when to write alphabetically or numerically. There are different conventions.

- Convention 1– When counting items, write out the numbers alphabetically when less than 10. Exception is when you are defining some scientific number or some decimal numbers or informal measurements or first word of sentences or in paragraph comparing more than two items.
- Convention 2 – When counting numbers write out numbers expressed in one or two words.

Film 12

Possessives in scientific writing- The rules for forming possessives are.

- For singular nouns when the word ends in a sound other than S add a 's
- When the word ends in an S sound be guided by pronunciation
- For plural nouns end with S simply add an apostrophe
- For plural nouns that do not end with S simply add an apostrophe and S
- In some situation possessives are replaced by nouns treated as adjectives.