Report Format

Good layout and consistent formatting make a report easy to read, pleasing to the eye and demonstrate pride in your work.

Layout and Formatting

Handwritten work is acceptable and must be legible and neatly set out. Your thesis and professional work must be typed. **Table 1** and **Table 2** give format settings for typed reports.

Table 1: Recommended format settings for simple reports

Font – body of report	Times New Roman, Bookman (use 1)
Report Headings	Arial (sans serif font)
Font size	12 point
Paragraph spacing	6 pt
Line spacing	1.5
Left Margin	25 mm
Right margin	25 mm
Top margin	25 mm
Bottom margin	25 mm

Bold and italic typefaces are used to emphasise particular words or phrases. Do not overuse these features. **Bold** is usually used to emphasise one or two words. *Italics* is slightly less striking to the eye, so is used to emphasise phrases or entire sentences.

Underlining is seldom used. However, underlining is effective to emphasise part of a word, for example unrepresentative.

Certain words can also be emphasised by the use of CAPITALS but should be rarely used. A common use is where the reader might otherwise misread the meaning of a sentence such as “Water from outlets in this laboratory is not potable and MUST NOT be consumed.”

Font sizes and styles are outlined in **Table 2**.

Section/Chapter Numbering System

The numbering of section/chapter headings and subheadings is normal in a report. The Introduction is generally numbered 1 with the Conclusions section having the last number. Sometimes the references section is also

included in the numbering system. Third level headings are the generally accepted limit (e.g. 8.4.3 *Errors in data acquisition*). Too many subheadings and levels can become confusing and cumbersome.

Table 2: Sample Font Styles

Font Style	*Description*
TITLE HEADING	18 pt Arial bold font, small caps, start new page, align left
1. HEADING LEVEL 1	14 pt Arial bold font, all caps, align left, 18 pt line space before
1.1. Heading Level 2	12 pt Times italic bold font, align left, 12 pt line space before
Paragraphs	12 pt Times font, justify left and right margins, sentence case
Table/Figure Captions	10 pt Times font
Header	10 pt Times italic font, thin underline
Footer	10 pt Times italic font, thin underline
References	12 pt Times font, align left, indent second & consecutive entry lines

Page Numbering

All pages in a report should be numbered *except* for the title page. The preliminary pages such as Abstract, Contents and Acknowledgements are numbered using Roman numerals (i, ii, iii etc.).
The main body of the report, i.e. from the Introduction section onwards, uses Arabic numerals (1, 2, 3 etc.) for page numbering. There are several locations where page numbers can be placed but the convention in reports is at the bottom centre of the page.

Page Headers & Footers

A saying particularly relevant here is *often the simplest approach is the best option* (or, *KISS* – Keep It Simple, Stupid). Except for page numbers, minimal use should be made of headers and footers.

In textbooks, the header contains the name of the book or the chapter heading whilst in a report it might be the abbreviated report title. In an industry report, the footer usually contains information for document control, such as: file name, version number, date created, etc.

Overly elaborate headers and footers can distract the reader, not adding any value to the communication process. So if you wish to use them, ask yourself for each particular piece of information how this aids the communication process and is it really necessary? In a thesis, headers and footers are not used except for the page number.

Numbers & Measurement

All units of measurement should be stated in metric form following industry convention and are abbreviated according to the International System of Units (SI), for example:

- electrical field strength is normally reported in volts per metre, e.g. 3 V/m
- wire gauge is usually reported in millimetres, e.g. 5 mm
- baud rate is reported in kilobits per second, e.g. 30 kbps or kb / s

Note the space between number and unit. Numerals and their units, and equations should not run over a line. The number and unit or entire equation should appear on the same line. A non-breaking space placed between the value and unit will automatically ensure that this occurs. [In MS-Word, a non-breaking space is inserted by typing Ctrl-Shift spacebar]

Pay particular attention to the number of significant figures in a value such that it reflects the accuracy of that value. If necessary use appropriate scientific notation (e.g. $x10^6$) or scaling of units (e.g. M, k, m etc.). A common trap for the inexperienced report writer is to transpose calculated values from a calculator's display or spreadsheet directly into a report, forgetting about significant figures. For example, an engineer might use a spreadsheet to calculate the current flowing through a resistor. Whilst the calculated value in the spreadsheet might be shown as say 0.0013467 A, the actual value in the report should be written as, say, 1.35×10^{-3} A or better still 1.35 mA. Also be careful with the use of capitals in units as for example 10 MW is not the same as 10 mW. There are conventions with respect to using numerals and these are summarised in **Table 3**.

Table 3: Conventions for using numerals

Description	*Example*
Spell out all figures if they are placed at the start of a sentence.	Twenty-five data samples were taken
Use figures for all units of measurement and all which involve abbreviations.	4 mA 2 W The 2nd and 20th samples
Spell out numbers from one to ten when used without a unit and use figures for numbers 11 and above without a unit.	There are eight channels and 24 cells…
No commas or spaces for figures under 10 000.	1000 5870 9999
Numbers 10 000 and above have a space.	11 000 120 000 1 228 356 units

Formulae

Equations are generally placed near the centre of a page, with consecutive equations vertically aligned about the equals (=) sign, for example:

$$y = mx + b \qquad (1$$

$$X = \lambda(h + f) \qquad (2$$

Equations should be numbered consecutively as they appear in the text, with a number in brackets near the right hand margin. This number is used for identification in the body of the report.

Figures and Tables

Figures include diagrams, graphs, sketches, photographs and maps. Figures help in understanding the concepts being discussed in the report. Graphs are particularly useful in demonstrating the existence of a relationship between two or more variables. Tables consist of data presented in columns and rows. They are useful when the exact value of the numbers is important to the discussion.

Figures and tables should, as far as possible, be self-contained in terms of highlighting a particular point for the reader's attention. However, they are not meant to be a medium of communication separate from the body of the report. Each figure and graph in a report **must** be referred to in the body of the report. If this cannot be done, then it should not be included in the report. All figures and tables must be numbered in the order they are mentioned in the report (Table 1, Table 2, Figure 1, Figure 2 etc.). Many word processors allow the table and figure number to be automatically cross-referenced in the body of the report.

Each table and figure should have a very simple, descriptive caption. Any symbols or abbreviations used in the figure or table must be explained in the report. Units of measurement should be placed in the column or row headings. Explanatory footnotes may be added to tables, usually in a smaller size font directly under the table.

Avoid using the expression "the figure above" or "the figure below", as locations may change. Place the figure or table in close proximity to and preferably after where it is first referred to in the body of the report. An example of a simple layout for a table is shown in **Table 4**.

As a general rule, labels are usually centred on a page where:

- the label for a table appears *above* the table; and
- the label for a figure appears *below* the figure.

Table 4: Resistivity and Temperature Coefficient of Different Materials at 20 C

Material	*Resistivity (Ω m)*	*Temperature Coefficient (per degree C)*
Silver	1.59×10^{-8}	6.1×10^{-3}
Copper	1.68×10^{-8}	6.8×10^{-3}
Aluminium	2.65×10^{-8}	0.429×10^{-3}

Table 4 illustrates the following points

- The data in the table are clearly set out with column and row headings showing appropriate units placed within brackets.
- The table is centred on the page and is not crowded by surrounding text.
- The caption is succinct and conveys the meaning of the information. Captions are usually a descriptive or informative statement to help focus the reader's attention on a particular issue.

If you are using another writer's table or figure, do not include the caption, number or formatting from the sourced reference material as it will be incompatible with your report numbering system and format. You must also **reference** any figure or table if copied or adapted from another source. **Otherwise it can be considered plagiarism and a breach of copyright.** In the case of:

- tables—the reference is placed under the table using the expression "Source: Smith (1994), p. 58."
- figures—the reference is placed under the figure using the expression "after Jones (1996), p. 42."

Both are generally typed in 9-point font.

The quality of an illustration is very important. If the image is poor and difficult for the reader to clearly see the point being made, then, except in special cases, it should not be included in the report as it will detract from the quality of the report. Use of colour is another trap for inexperienced report writers. Colour is a formatting option but should be used carefully otherwise the effect on the reader is numbed. Colours will not be reproduced in conventional black and white photocopying. Therefore they should not be relied on to distinguish important features of an illustration or graph.