A Few Words...
From the day you walk into university until the day you leave, there are many reports you’ll have to write. As a student, these reports might be the bane of your life—but the truth is, you’ll have to write them no matter where you go. From a simple work assessment report to the high-flying technical write-up, reports are a common form of workplace communication. You may have to write a report to a ‘client’ or an assessing manager. Report writing is an essential skill for professionals; master it now and writing reports won’t have to be a pain. Here’s where to start...

How do I consider the audience?
As you write, ask yourself:
• Why have they asked for a report?
• What do they need to know?
• How will they use the report?

Throughout your study and future career you will write reports for people who have little or no background in the area of work your report covers. If this is your audience, then your report should be easy to understand. Define terms, offer some background knowledge and use relevant examples. For example, an environmental impact statement for a newspaper would be written in a style that best suits the non-technical reader.

On the other hand, if you are writing a technical report intended to be read by a team of engineers, you can assume a level of prior knowledge and use specialised technical language. Someone expert and knowledgable in your own field will not necessarily look upon your work kindly if you write your report with a layperson in mind.

How do I analyse my task?
Analysing your task is very important. If you haven’t got a clear picture in your mind of where you want to go, planning the report is going to be difficult. So, here are some questions you should ask yourself:
• Do you understand the type of report needed? (e.g. experimental report, design proposal, etc.)
• Do you know how big your report needs to be?
• Do you know what is required in the report?
⊙ Who is my audience? (e.g. clients, lecturers, assessors, managers etc.)
⊙ What is the problem/question?
⊙ What is the aim of the report?
⊙ What key points or issues need addressing?
⊙ What information do you need to collect?
• Now that you’ve got these basic ideas in mind, how and where will you find the relevant information?

How do I clarify my aim?
The aim of your report should be clear from the type of report needed. In an experimental report the aim is very different to that of a design report. For example:

Experimental Report
An experimental report aims to report on:
• an experiment or research.
• what was achieved during the course of the experiment.
• what was concluded and how this compares with previous published results.

Technical Design Report
A Technical Design report aims to:
• solve a problem or;
• recommend a design
What is the basic structure of a report?

Types of reports can vary greatly; they can range from an experimental report to an environmental impact statement. There is however, a basic structure common to most reports, irrespective of their type.

The Major Components of a General Report

- Title Page
- Abstract
- Table of Contents
- Introduction
- Main Body
- Conclusion
- Recommendations
- References
- Appendices

In less than 200 words ... what was the problem, how was it investigated, what did you find out and what do your findings mean?

A list of the major and minor sections of your report.

Set the scene; give some background information about the topic. State the aim/purpose of the investigation. Outline the body sections.

Organise the sections in a logical sequence: what you investigated, what you found, what interpretations and what judgements you made. Use short informative headings and subheadings.

What has been achieved and what is the significance of your findings and your discussion? Have your aims been successful or not?

What do you recommend as a course of action following your conclusion?

A list of all the sources you used.

Any information (graphs, charts, tables or other data) you used in your report but did not include in the body.

Writing Your Report

This section deals with the next step, writing the important sections of your report: the introduction, conclusion and abstract. They are important because 9 times out of 10, readers will focus on these sections.

Abstracts, Introductions & Conclusions—what's the difference?

An abstract is a brief statement which outlines the report in full; what was done, achieved, decided and concluded. The introduction is a section which states your aims and some required background knowledge. An introduction will also outline the body of the report (where you state what you will do).

Don't confuse the introduction with the abstract or summary; they are very different. Writers often confuse the main purpose behind writing an introduction and an abstract. The common misconception is that one is simply a smaller version of the other (that the introduction is a rewritten, chopped-up version of the abstract). However, this is not the case.

The Abstract

Most reports need an abstract, but they are generally more important for technical reports or scientific documents. An Abstract:

- is a succint passage which provides a brief outline on what was achieved/decided/concluded in your report.
- is placed on a separate page before the contents page.
- can be written last so that every bit of necessary detail is taken from the finished report.
- is one part of a report that will certainly be read by a client/assessor/manager. The rest of the report is read if more detail is required.
- is about half a page in length. Sometimes a word limit is given. This can range from 50-300 words.

Example Abstract:

A trailer rig was used to analyse the properties of an undamped system and experiment with a range of instrumentation.

It was found that two modes of vibration exist, these being longitudinal vibration and rotational. The damping ratio and natural frequency were calculated and are included in this report. The damping was found to be linear.

While the experiment was useful it did not closely resemble road conditions. Actual road conditions would result in successive bumps and constant vibration while the wheels rotated the whole time.

Finally, it was decided that given cost considerations, the XY plotter provided accurate results and manageable data.
**The Introduction**
The aim of an introduction is to state what you have been asked to achieve and list your current course of action.

**Example Introduction #1:**

**Introduction**
This document compares a range of instrumentation of varying cost and sophistication and investigates the properties of undamped systems. The natural frequency and damping ratio of these systems will give an indication of their behaviour when 'excited'. Furthermore, an analysis of the mathematical model as compared to actual road conditions must be completed and equipment suggested for further studies of the trailer.

**Purpose**

**Aim; part of a major report.**
Requires an outline of the steps you will take.

**Example Introduction #2:**

**Introduction**
Machinery and equipment in industry is heated up and brought on line gradually to avoid problems generated by thermal generated stresses. In this experiment the severity of stress due to sudden temperature changes are examined.

**Background**

**Aim; it is not necessary to outline everything in a short or introductory report. Be succinct!**

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**The Conclusion**
The conclusion (along with the introduction and abstract) is generally the section most read by clients. If you can conclude your work/findings well, you facilitate your client's understanding of your work's significance, your achievements and whether your aims have been successful or not.

Even in the face of failure, e.g. your experiments do not work, a proper conclusion would demonstrate an understanding of what you achieved. Here is how to do that:

- Note the shortcomings and pitfalls of the methods and/or equipment used
- State your findings from the analysis of your data
- Outline possible recommendations (e.g. provide suggestions for further research).

Recommendations may form a separate heading if substantial.

**A Note of Caution:**
Do not use your abstract to write your conclusion or vice versa as the reader will believe you have not put enough thought into why you are doing your work. Remember the abstract, introduction and conclusion have different purposes, different emphasis and different structures.

**Example Conclusion:**

**Conclusion**
The results of the damping coefficient and the natural frequency of the system are fairly consistent given the small amount of data given and how prone this method is to error.

In looking at the data provided by the pointer and scale it is surprising that the results were so consistent. The equipment was difficult to use and read and not really adequate for this type of testing.

The LVDT transducer provided clear results for the XY plotter and the digital oscilloscope, both providing graphs that were very clear. I recommend the use of the XY plotter over the digital oscilloscope due to their difference in price ($4000 for a XY plotter and $7000 for a digital oscilloscope). The XY plotter does not require the use of a computer and printer to get it into a hard copy form where the data can be analysed.
How should I present my report?

• READ assignment guidelines in your course outlines. Reading these instructions will inevitably save you hours in that final effort to finish the report.

• Impress your marker by making it look like a professional report. You can do this easily because many word processing programs have a report template you can use or adapt.

• Type your report; it makes your work easier to read. Calculations can be done by hand, but adhere to the following guidelines:
  ⊗ Rule up your page. Put answers to all your calculations in a right hand column. This stops the reader from having to search your page for them.
  ⊗ Double space your work. Don't squash visuals and text together.

• Everything must be geared towards making it easy for your readers. See our brochure on Technical Writing for additional advice on language and layout of reports.

• Project and thesis reports are kept in the collection of the main library and your school library. Refer to these as models.

Remember, keep it simple!

1. What was the original request? Does your work fulfil the requirements?
2. What does the audience need/want from your report? Have you included it?
3. When editing your report, retain what is important/ relevant, delete what is not.
4. Is there much repetition? Can you merge or delete sections?
5. Do your conclusions come from your findings and not from generalisations? (See example opposite).

Example Conclusions...  
Three academics are travelling on a train through Britain. As the train crosses into Scotland they see a black sheep in a field.

The first academic remarks "Oh look, the sheep in Scotland are black".

The second academic replies "No, some sheep in Scotland are black".

The third academic declares "There is at least one sheep in Scotland that is black on at least one side".

Need to know more?  
IF ALL ELSE FAILS, revisit your original task analysis and TALK TO YOUR ‘CLIENT’ (lecturer, tutor, marker etc.) and clarify what they want in the report.