

# Outline

Many documents, including papers and reports, follow this outline:

## **Title**

Short titles are by far the best, but the title must describe the unique content that is presented. A good title is designed to intrigue the reader, not to encompass the entire content.

## **Abstract**

The abstract is written last, when the document is complete. In contrast with the conclusions, it is a summary that contains a few sentences about each of the following items:

1. Objective
2. Importance
3. Method
4. Key results and findings

## **Introduction**

Although written in the end, the importance of the introduction cannot be overemphasized. It does not contain the substance of the document but it sets the stage and establishes the tone. A poor introduction signals a poor document. A proper introduction contains the following elements:

1. Start with a thoughtful first sentence that concisely summarizes the objective and why it is important; above all, inspire the reader to read on
2. State the long-term goals and visions of the work
3. State the short-term objectives that are specifically addressed to achieve the long-term goals
4. Provide a motivation and justification for the work to establish why the results are useful
5. State the scope of the work to identify the problems that are, or are not, considered
6. Identify who has done what in the past. Sometimes, this review requires a separate section. However, care should be exercised to avoid an unnecessarily lengthy literature review. A concise and well-informed exposure of the background fits in the introductory section.
7. Depending on the complexity of the document, provide an overview of the sections. This type of overview is more common in books, reports, and theses than in conference and journal papers.
8. Identify the novelties of the document to let the peer reviewer understand that there is something new in this document, and to let the general reader know which highlights to look out for

Between the Introduction and the Conclusions there exist no mandatory section organization. The outline depends strongly on the work that is carried out. The following two sections provide a suggested organization and suggested content.

**Methodology**

1. Build-up
  - Bring the reader up to speed on the existing methodology; be brief
2. Developments
  - Explain the new use, merger, or extension of the methodology; be detailed
3. Advantages
  - Candidly substantiate what is this better than what has been seen before
4. Contrast
  - Explain in detail how the new methodology compares with other approaches
5. Disadvantages
  - Honestly describe the pitfalls and downsides of the new developments

**Application**

1. Case selection
  - Employ realistic examples that bring out the best in the methodology
2. Enable reproduction
  - Give complete data to enable the reader to reproduce the results
3. Demonstrate
  - Show results that highlight what the developed methodology provides
4. Visualize
  - Include informative and visually appealing figures and tables
5. Discuss
  - State the experience gained from the examples: including new results, efficiency, etc.
6. Compare
  - Contrast the results with earlier work

**Conclusions**

The conclusion is not a summary. Rather, the conclusions are observations from a higher and broader viewpoint. They state the significance and future use of the developments. They may also suggest problems to be addressed in future work.