

MAT 390 Report Format

I. Title page

- Project/problem name
- Group members

II. Executive Summary

The purpose of the executive summary is to briefly describe the problem and to summarize the solution(s) and solution method(s). The intent is for the student to distill the essence of the problem into a document that conveys the information in a clear and concise manner. The summary should be a "stand alone" document, no more than two pages in length. The instructor should evaluate the executive summary in terms of style, substance, organization, and correctness.

A. Substance

1. Briefly describe the problem and specify the context in which it occurs.
2. Summarize the approach.
3. Summarize the results obtained, both negative and positive as appropriate. Comment on the significance of these results.
4. State briefly whether this problem warrants further examination. If so, recommend the direction future research should take.

B. Organization

The executive summary should have a logical flow. Start by describing the problem in the introductory paragraph. In the case of a single requirement problem, a brief discussion of your findings is also appropriate in the introduction. In the case of a multiple requirement problem, address the solution to each requirement in separate subparagraphs.

1. Style

Avoid unnecessary use of the passive voice, slang, technical jargon, and acronyms. The use of simple sentences usually communicates the information best.

2. Correctness

The document should be free of spelling, grammatical, and punctuation errors.

The classic book *The Elements of Style* by Strunk and White is highly recommended as a quick reference on style and grammar. This book can be found in most bookstores or ordered online for about \$6.95. The full reference is:

W. Strunk and E.B. White, *The Elements of Style*, fourth edition, Allyn and Bacon: Needham Heights, MA, 2000. (ISBN: 0-205-30902-X)

III. Appendices

Include one appendix for each major requirement or subsection of the problem.

1. Problem Statement

The first paragraph is a concise statement of the problem.

2. Facts Bearing on the Problem

This section contains statements of undeniable facts having influence on the problem or its solution. Exercise care to exclude unnecessary facts that may confuse the issue. Some facts are uncovered during the research and problem-solving stages, while others are inherent in the directive assigning the problem.

3. Assumptions

State any assumptions necessary to solve the problem. Assumptions are used and needed in the absence of factual data. The assumption, while not a fact, must have a basis in fact. Justify your assumptions.

4. Analysis

This section presents a detailed solution to the problem. Don't just write line after line of mathematical equations. Embed the mathematics and symbols in coherent sentences. Omit any of the following sections that are not applicable.

- (a) Definition of Variables and Symbols
- (b) Methodology
- (c) Formulas and Expressions Used and Manipulated
- (d) Calculations
- (e) Diagrams (Essential Plots and Graphs)
- (f) Discussion of Results
- (g) References to Supported Annexes

5. Conclusions

Conclusions must follow logically from the analysis. Do not introduce new material in this section. Answer the problem statement directly.

IV. Annexes

1. Other Supporting Plots and Graphs

2. Computer Output

3. Data Lists

V. Acknowledgments

Be sure to include a brief statement of thanks to any individuals who have provided data, analysis, or particularly helpful comments on your work.