

## Research Methodology and report writing: A review (Extracted from EMT 2445)

## Proposal

### General guidelines:

*Aim of a research proposal:*

To establish that the candidate has:

- a viable and researchable problem
- an acceptable plan of action for undertaking the research
- done sufficient preparation to establish the rationale for the research
- a feasible chance of completing the research

## Proposal



Jomo Kenyatta University of Agriculture and Technology  
College of Engineering and Technology  
School of Mechanical, Materials, and Manufacturing Engineering  
Department of Mechatronic Engineering

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### Design and fabrication of a mobile wheel changing robot for passenger cars. (FYP19-13)

Final Year Project Proposal

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Supervisor

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Technologist

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June 2023

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# Research Process

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## Proposal Structure:

### Contents

1. Title page
2. Declaration
3. Abstract
4. Table of contents
5. Nomenclature (if any)
6. Introduction (Chapter 1)
7. Literature review  
(Chapter 2)
8. Research design and  
Methodology (Chapter 3)
9. Expected outcomes  
(Chapter 4)
10. Conclusion (Chapter 5)
11. References
12. Appendices (if any)

### Proposal Structure:

Notes:

1. Numbering of declaration page up to Nomenclature – Roman numerals
2. Numbering of Introduction page onwards – Arabic numerals
3. Font: Times New Roman or equivalent (Sharp-edged characters)
4. Font size: 12
5. Font colour: Black

### Proposal Structure:

Notes:

6. Spacing: 1.5

7. No. of pages: Minimum = 15, Maximum = 25. This excludes any appendices

8. Figures and tables should be captioned appropriately, and reasonably sized.

# Research Process

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## Proposal Structure:

Notes:

You will use Latex, in combination with Bibtex or Jabref

## Proposal

### General guidelines:

#### 1. *Title page:*

Refer to project reports that are available for your perusal

#### 2. *Declaration:* Must be duly signed and dated by both students (do not include supervisor at this stage)

#### 3. *Abstract:* A summary of the contents of the document: background, proposed approach, expected outcome



## Proposal

### General guidelines:

4. *Table of contents:*  
Generated by latex.  
Do not exceed sub-subheading, (e.g. 1.1.1)
5. *Nomenclature (if any)*
6. *Introduction*  
Give a brief background of the problem, and puts the reader in the proper context of the field to be researched on

### Proposal

#### General guidelines:

##### *7. Literature review (Chapter 2)*

- Reference to existing methods and tools that can aid in the research, what has been done previously, and what the gaps in the research are.
- Note: Do not pretend to solve a problem that already has a solution, by ignoring what other people have done, only to use their approach. Give credit where it is due

### Proposal

#### General guidelines:

##### *8. Research design and Methodology*

- How you propose to tackle the problem, the facilities/resources that you will require and the time needed to complete the research.
- Include a timeline and a budget at the end of it.

## Proposal

### General guidelines:

#### *9. Expected outcomes*

- What will be the measurable outputs of your work?
- Note that this is not just a list, it must be properly justified.

## Proposal

### General guidelines:

#### *10. Conclusion (Chapter 5)*

- Your overall conclusion over the viability and achievability of the project, based on the approach that you have proposed.

#### *11. References*

- Proper formatting expected, as demonstrated in class.

Reference style: IEEE

#### *12. Appendices (if any)*

- To support your literature and methodology.