**Instructions on how to format the**

**Mechatronic Engineering Research Project 2 extended abstract**

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**ABSTRACT**

All students enrolled into the Mechatronic Engineering Research Project 2 unit are required to submit a two (2) page Extended Abstract as part of their assessment. This document provides instructions on how to format the Extended Abstract and has itself been prepared according to those instructions – you may therefore wish to use the MS Word version of this document as a template to copy and paste your Extended Abstract.

The deadline to submit an electronic copy of the Extended Abstract is **11:59pm on Friday 19th October 2018**. Please note that **no** printed copy should be submitted through the Engineering Assignments Office and, as such, *no Engineering Assignments Cover Sheet will be available for this assignment*.

Please note that your Extended Abstract may be made available on Curtin University websites and thus will be publicly accessible. Should your final year project contain information of a sensitive nature then you must still attempt to produce an Extended Abstract of sufficient generality that it is acceptable for general release. In the case that you do not wish to have your Extended Abstract made publicly available then please discuss this with your Academic Supervisor and then with the Unit Coordinator.

The electronic copy of your Extended Abstract should be submitted in Adobe Acrobat (pdf) format and named according to the following convention: *{Student ID}.pdf* where {Student ID} is your Student ID, *e.g.*, *12345678.pdf*. Instructions on how to submit the Extended Abstract will be available on the Blackboard area of the Mechanical Engineering Research Project 2 unit.

As mentioned above, in addition to an electronic copy of your Extended Abstract, you will also need to submit a Permission Sheet through Blackboard at the same time or else separately as a hard copy before the deadline. If you wish to submit an electronic copy then it should be in Adobe Acrobat (pdf) format and named according to the following convention: *PS\_{Student ID}.pdf* where {Student ID} is your Student ID, *e.g.*, *PS\_12345678.pdf*. If you wish to submit a printed copy of the Permission Sheet then please post it under the office door of the Unit Coordinator (Dr Ian Davies in office 204.431 for Bentley students) before the deadline.

**INTRODUCTION**

The Extended Abstract should be divided into the sections shown within this document, *i.e.*, Title Information, Abstract, Introduction, Results and Discussion, Conclusions, Acknowledgements (optional), and References. Unless otherwise stated, all text included within the Extended Abstract should be in 10 point Times New Roman or Symbol (for variables and equations, *etc.*). The paragraph should be justified (*i.e.*, not left aligned), single spaced and with no additional spacing before or after the paragraph unless otherwise stated.

The Extended Abstract **must be written on A4 size paper (NOT Letter)** and have margins of Top (2.5 cm) and Bottom (2.5 cm) for both pages. Margins for the first page should also include Left (4.0 cm) and Right (2.5 cm) and mirrored for the second page, *i.e.*, Left (2.5 cm) and Right (4.0 cm) – this is because the Extended Abstract will eventually be printed double sided. Page numbers and other header or footer items **must not** be included. Each new paragraph should start with a 5 mm indent apart from: (i) the first paragraph in each section, and (ii) the first paragraph following an equation, which should both start immediately at the left margin.

The Extended Abstract should be written in the past impersonal tense and avoid using the words “I” and “we”. The assumption of the reader will be that, unless otherwise stated, you were responsible for everything mentioned within the Extended Abstract and thus you do not need to continually state “I did” something. If you must refer to yourself then use “the author” instead of “I”.

The Extended Abstract should use the Chicago referencing system, e.g., (Tanaka, 2007) {Single Author} or (Tanaka & Itatani, 2007) {Two Authors} or (Tanaka *et al.*, 2007) {Three or more Authors} as appropriate. When the references are listed at the end of the Extended Abstract, the “*et al*.” in the final example should be replaced by the full list of authors.

Equations must be computer generated and separated from text above and below by a 10 point blank line and indented 10 mm from the left margin. Equations should be numbered sequentially with the numbers being positioned adjacent to the right edge of the margin and enclosed in brackets, *e.g.*,

 (1)

All symbols should be in italics and their meaning explained (*e.g.*, the strength, *S*, of the specimen). Standard non-English phrases and abbreviations such as *i.e.*, *e.g.*, *etc.*, *in situ*, and *in vivo* should be italicised. If you wish to emphasise or make a particular point within the text then use *italics* rather than bold or underlining.

**RESULTS AND DISCUSSION**

The title of the Extended Abstract should be exactly the same as the final title of your thesis. You don’t need to use the same title as was originally included in your Project Nomination form as the scope of the project may have changed since that time. If you are unsure about a title then please discuss this with your supervisor. The title should be centre aligned, placed immediately at the top of page one and should be in 12 point Bold Times New Roman font and should be **completely in lowercase apart from Proper Nouns**, *etc*.

Following the title there should be a single 11 point blank line after which is listed the “authors” in 11 point Times New Roman font and centre aligned. The first name listed should be yourself, the student, and presented in the format and order as shown above, *i.e.*, first name in full, middle names as abbreviations, and family name in uppercase. In addition to your name, there should be at least one other name listed, namely that of your Academic Supervisor, with the format of their name being initials and then family name. If only you and your supervisor are listed then it should appear as, for example, “John A. STUDENT and C. Staff”. However, if you have another person (or persons) who has made a significant contribution to your project, *e.g.*, industry supervisor, then they should be listed after your name but before the name of your Academic Supervisor, *i.e.*, the Academic Supervisor should always be listed last. If you are unsure whether or not a person should be listed in the authors then please consult your Academic Supervisor. This additional author should be listed with an asterisk immediately after their name as shown in the example. If you include authors from multiple non-Curtin organisations then use \* first, then superscript #, and then superscript @. The same format also applies for supervisors from non-Mechanical Engineering departments within Curtin University.

Following the list of authors there should be a single 11 point blank line after which is listed the address for the Department of Mechanical Engineering exactly as shown in the example and centre aligned. If any of the authors are from non-Curtin organisations or non-Mechanical Engineering departments within Curtin University then their organisation name and address should immediately follow the Department of Mechanical Engineering address with the appropriate identifying symbol included immediately before the organisation name.

Following the list of addresses there should be a single 11 point blank line after which is listed the e-mail address of the Academic Supervisor in 11 point Italic Times New Roman font and right aligned to the margin. The reason for including the Academic Supervisor e-mail address instead of yours is that the Extended Abstract may be viewed many years later and the Academic Supervisor will most likely be the only person with their original e-mail address at that time.

Following the e-mail address there should be two (2) 10 point blank lines after which is written the heading “ABSTRACT” in uppercase 10 point Bold Times New Roman font and indented 1.0 cm from the left margin. After this heading there should be a 6 point blank line before the main abstract text. The abstract text should be in 10 point Times New Roman font and indented by 1.0 cm from the left and right margins as shown in the example. The abstract should be approximately ten (10) lines in length and briefly mention: (i) background to why this project is important, (ii) your general approach to the project, (iii) key results and brief discussion, and (iv) an overall brief summarising sentence. Unlike the example given in this document, your abstract should be written as a single paragraph.

Following the abstract there should be two (2) 10 point blank lines after which is written the heading “INTRODUCTION” in uppercase 10 point Bold Times New Roman font. After this heading there should be a 6 point blank line before the main text which should be in 10 point Times New Roman font. The introduction section should be typically one third or one half of a page in length, *i.e.*, extending to the bottom or close to the bottom of the first page, and should provide a background for your project, for example, starting with a general overview or history of the topic and providing useful and other required information for the reader. If appropriate, provide referenced examples of earlier work carried out in a similar area to your project. When deciding on the level of information to include you should assume that the reader is an informed mechanical engineer but not necessarily an expert in the area of your project.

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*Figure 1: Example of a 6.0 cm wide figure in a text box with an invisible border and tight wrapping style.*

Following a general overview or history, the introduction section should gradually become more specific to the details of your project. Again, if appropriate you should include referenced examples of other relevant work previously conducted in the same area as your project – this will help to provide a context for the work you have carried out. At the end of the introduction section you should include one or two sentences to describe your aims during the project.

Following the introduction there should be two (2) 10 point blank lines after which is written the heading “RESULTS AND DISCUSSION” in uppercase 10 point Bold Times New Roman font. After this heading there should be a 6 point blank line before the main text which should be in 10 point Times New Roman font. The results and discussion section should be approximately two thirds or three quarters of a page in length and include two or three key figures and/or tables.

Each figure or table in the laboratory report should be continuously numbered (*e.g.*, Figure 1) and possess a caption using 10 point Italic Times New Roman font and centre aligned. Figure captions should be placed below the figure and separated by a blank line whilst table captions should be placed above the table and separated by a blank line. The axes of figures should be correctly labelled and units indicated where necessary. Where possible, figures should be approximately 6.0 cm wide with a suitable blank space surrounding the figure so as to visually separate it from the main text – it may help to place the figure or table into a text box with an invisible border. If the figure or table is relatively wide then it may be more suitable to place the figure or table completely across the width of the page, *i.e.*, no flowing text down the left or right sides. Remember that the Extended Abstract will eventually be printed on a black and white printer so different weight or line styles should be used in preference to different colours. If you must use colour in your Extended Abstract then make sure that it also prints clearly in black and white.

*Table 1: Example of a table (in a text box with an invisible border) that covers the entire width of the available page.*

**CONCLUSIONS**

Following the results and discussion there should be two (2) 10 point blank lines after which is written the heading “CONCLUSIONS” in uppercase 10 point Bold Times New Roman font. After this heading there should be a 6 point blank line before the main text which should be in 10 point Times New Roman font. The conclusions should be typically five (5) lines in length and include an initial introductory sentence and then the main conclusions of the project.

**ACKNOWLEDGEMENTS**

If you wish to acknowledge the help of someone **not included** in the author list, *e.g.*, technical assistance, then this should be included in an optional brief acknowledgment(s) section. For example, “The authors wish to thank (name) of (organisation) for (brief description of assistance).”

**REFERENCES**

Following the conclusions (or optional acknowledgement(s)) there should be two (2) 10 point blank lines after which is written the heading “REFERENCES” in uppercase 10 point Bold Times New Roman font. After this heading there should be a 6 point blank line before the main text which should be in 10 point Times New Roman font.

References in Chicago format should be included in this section. If you include references to journal articles then, for reasons of space, do not include the article title. Remember to include page numbers or ranges of page numbers for books.

**TEMPLATE**

You may wish to use this document (in MS Word format) as a template for your Extended Abstract. Versions of this document in both MS Word and Acrobat PDF formats should be available on Blackboard.

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