UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

**School of Computer Science**

**Computer Science Honours**

**Introduction to Research Methods**

**PHASE 6**

**Prototype Research Proposal**

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**1 Aim**

The aim of this phase of the IRM topic is give you some experience in the process of preparing a research proposal, and more experience with writing. This will be accomplished by the preparation a research proposal based on your research topic and hypotheses from Phase 5.

**2 Instructions**

1. You are to prepare a prototype research proposal based on your research hypotheses from Phase 5.
2. Your research proposal should include a full introduction with appropriate citations (3 to 4 pages),
3. an outline of background and related research, consisting of the sections and subsections you will use, motivation for why you have chosen these sections and a plan for finding relevant literature including the resources you will use and appropriate search terms. (2 to 3 pages),
4. an outline of your research method, including research hypothesis/hypotheses, motivation, and research methodology and how this relates to your research hypothesis/hypotheses (presented briefly in bullet point form, 2 to 3 pages),
5. a full research plan, with introduction and conclusion, risks and how these will be managed, as well as a full list of deliverables and timeplan with detailed motivation (3 to 4 pages).
6. a document conclusion (1 to 2 pages)
7. The research proposed must be realistic for an Honours Research Report.
8. Please feel free to see me if you need any help with this task.

You should use the research proposal structure guidelines in preparing this document, as well the timing information handed out for the research report. Refer also to the feedback from Phase 5 and Section 6 in this document. A template for this phase is available. Your document should use 11 point text and witsa4.sty.

**3 Submission Deadline**

Your research proposal is due by 10h00 on Tuesday 24 May. Submit a PDF file, a PostScript file and all .tex and .bib files. Also submit the original article in PDF format. You must also submit a signed declaration form.

**4 Assessments**

This task counts 20% of your final mark for the topic.

**5 Time Usage and Planning**

You will have 30 hours for this task between 15 April and 24 May. This should be more than enough time if you plan accordingly. Do not leave everything to the last minute.

**6 Additional instructions and comments**

1. You need to state early on the focus of your work, particularly in your abstract and introduction. It is important that the reader can find out early in the document any particular limitations or restrictions pertaining to your research question.
2. I do not expect you to read beyond the original article. However, if you are already aware of a reference which would be appropriate to cite, then please use it.
3. It is important to get your chapter introductions and summaries and document outline right so that your reader understands what is coming next and why. It is not sufficient when describing what is about to follow, either in an introduction or an outline, just to list the section headings. You need to go beyond this to direct and guide the reader by giving some idea of the specific content.
4. The introduction chapter should set the scene – it shouldn’t be too detailed. Only give definitions if they are necessary to understand the material in this chapter. Someone reading the introduction should get some idea of what the research is about, and then decide to read further for more details or not. You should give an indication of what a solution will be, for example, developing a new algorithm, but without going into too much detail of how you will test the hypothesis. You must use citations to support your statements (within the limitations of this exercise).
5. Your timeplan must be more detailed and motivated than the example you saw in the research proposal in Phase 3. It must also match with the timetable given for the research report, and include all deadlines listed in this timeplan. However, you can assume that this is your final proposal document, so you do not need to account for the time allocated for the proposal.
6. You need to describe how long each component will take and why each component will take the time you have estimated. It makes sense to link your timeplan with your major deliverables, but to give sufficient detail to your timeplan, you may need to consider events or documents over and above these major deliverables. You should also consider the time for the report write-up and presentation.