Proposal Guidelines, IERG4998 *Draft, 8 Sep 2017*

1. Purpose and Audience

The purpose of a *proposal* is to propose something; in other words, to put forward an idea or plan before you actually implement it. In the real world, proposals happen in a variety of contexts, but for IERG4998, you are proposing what you intend to do for your Final Year Project.

Your proposal should be written with the assumption that it will be read primarily by persons from within your field. As such, you will generally be able to use technical language without explanation, unless you use a term that is new to the field, or highly specialized, such that most of your classmates would not be familiar with it. In these cases, please give your readers the explanation they would need to understand your proposal.

2. Submission Requirements

3. Formatting Requirements

4. Content and Organization

Your proposal should include the following sections:

Background

You should begin your proposal with some background information introducing the topic. What is the general topic you are looking at? Why is it important? Is there any background information your reader should understand in order to understand your proposal?

Description of problem ***[HKIE Graduate Attribute (e) Dimension (1)]***

Your project is likely investigating some type of engineering problem, or gap in an existing process. In this portion of you proposal, you want to clearly identify what that problem or gap is. Some questions you might want to consider would include, how are people trying to address this problem currently? Why is the current solution not the best? What is wrong with the current approach being used?

For example, you may have identified an algorithm that can be improved; in this case, you would want to explain why the current one is sub-optimal. Another example might be, if you are designing a game, what aspects are currently lacking in similar games that you intend to introduce?

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Methodology ***[HKIE Graduate Attribute (c) Dimension (1); HKIE Graduate Attribute (c) Dimension (2);]***

There are two main things you want to communicate in this section. Firstly, what do you intend to build, design, or implement in order to solve the problem you described in the previous section? Perhaps you will design a new algorithm or build a physical device. Explain here what your solution will look like. Although you may not have the details worked out yet, explain broadly what you intend to do.

Secondly, how will you actually build, design, or implement your solution? What steps will you need to take in order to actually finish it? For example, you may need to purchase materials to build a device, familiarize yourself with a programming language, or attempt to replicate an existing algorithm in order to implement your improvement. In this section you will want to lay out step-by-step what you intend to do to complete your project.

Testing ***[HKIE Graduate Attribute (e) Dimension (2)]***

Finally, you will want to explain briefly how you will know if you have been successful at solving the problem. For example, how will you test to see if your algorithm more efficient than the one it would be replacing? How will you know if the device you are building is solving the problem it is designed to address?

References ***[HKIE Graduate Attribute (g) Dimension (1)]***

After the end of the proposal, please list some sources that you are consulting to learn more about this topic. This can include both sources that you have already looked at carefully, sources that you have found and plan to consult, or sources recommended by your supervisor that he or she had identified as being relevant to your work.

For your reference list, please use IEEE style, as is standard in our field. For more information about IEEE style, please consult https://www.ieee.org/documents/ieeecitationref.pdf

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