**ENCS 282/4 Technical Writing and Communication**

**Instructor: Terry Newman**

**Innovation Proposal (30%)**

This assignment is a group project (three students per group), and it has three components:

1. **Formal Written Proposal (15%, due April 9th as a printed copy at the beginning of class)**

In this substantial writing assignment, you will be asked to prepare a formal proposal in which you describe a specific small-scale engineering-related problem and its causes, review possible alternatives, and recommend a practical solution. This paper will show your ability to do research (through the Concordia library and on the Internet) and write a persuasive and well-structured report. Your proposal will be approximately 2,000-2,500 words long (excluding the bibliography).

The goal of this report is to outline to a particular audience the solution to a specific small-scale problem, and determine if your solution is practical and feasible. It is the goal of this project to offer more than one solution, compare the solutions and then argue for the best solution based on a set of criteria. You may choose to propose a new product or system. You could also propose a solution to make an existing technology greener, safer, faster, cheaper, smarter, more user friendly, or more efficient.

Your report must have an effective problem statement. You have to argue to establish the existence of a problem, its significance, and its major causes. Your study must make clear that you are recommending a particular, feasible design/solution. You must state, in clear terms, what your recommendation will do to solve the problem. You must also consider alternative solutions to your problem. No problem has one solution, but others may be too expensive, too time consuming, or have undesirable consequences on the environment or public life. These rejected options must all be thoroughly explained so that the audience understands why they are not the best options, and why your recommendation is the most feasible.

If you can’t think of a topic, have a look at these questions and think about whether or not any of them will help you select a proposal topic:

Does something at Concordia University, the city of Montreal, or an organisation that you are in daily contact with need to change? Does the sewer system, public transportation, road safety, city and/or campus sustainability, skyline architecture, internet server, highways or bridges have problems that you have the solution for?

Does an institution, a city, or a country have some small-scale problem that requires an engineering solution?

What company do you see yourself working for in the future, and do they have problems to solve, or situations that need to be improved? You can also critique a proposed solution to a particular problem that you think won’t in fact solve the problem, recommending a course of action to pursue a more feasible solution.

After you’ve identified a problem, you must think about the feasibility of the solution. Is it something we can live with? Does it need to be addressed immediately? What are your criteria for choosing the best solution? Cost, time, labour, environmental concerns, efficiency, public acceptance, availability of materials?

Once you’ve examined several options, you will propose the solution that you think is the best. You must provide reasons and evidence to demonstrate to the reader that this is the best solution.

Your **audience** will be an individual or group with the authority to enact your project’s recommendation. Your **purpose** is to persuade the audience of the significance of the problem you have chosen, as well as the benefits of the solution that you are recommending.

We will go over the required **style** and **organization** in class together.

**Research required:**

Your reference list must be consistently formatted in **IEEE** style. You need a minimum of **eight** sources.

Sources of information include printed materials, electronically available information, and people with expertise in aspects of your project. You must present your sources in bibliographical form.

* At least **five** academic secondary sources: books printed by academic presses or articles from scholarly journals.
* No more than **three** non-academic secondary sources: newspaper articles, popular non-fiction, magazines
* No tertiary sources: e.g. dictionaries or encyclopedias like Britannica and Wikipedia

**Formatting:**

Use Times New Roman 12-point font. Number the pages in the bottom right corner, with page one beginning on the introductory page (this means that your title page is **not** numbered). Your abstract on the title page will be set in on both margins and single-spaced, but the rest of the paper will be **double-spaced**. Headings and subheadings must be used properly. Your report must include illustrations (tables and/or figures). Illustrations should be properly labelled and if you do not create them yourself, their source must be included.

1. **Oral Presentation (10%, in tutorials during last two sessions of the semester)**

Each group will be asked to prepare and deliver an oral presentation on the topic of their Innovation Proposal. You will talk to the class about your proposal in a succinct and engaging manner. That is, you transform the research you have done into a 15-minute presentation. Your presentation must include the usage of visual aid (PowerPoint slides or equivalent).

Before beginning the presentation, you will ask the audience to imagine they are the recipients of the written innovation proposal. These are the decision makers with the authority to accept or reject your proposal. Assume an educated audience that may not be familiar with the more technical details of your group’s innovation. That means you will have to adapt the content so that the audience clearly understands what you are proposing.

Your TA will create the groups and prepare the presentation schedule. Please note that you’re required to attend all the presentation dates, as you’ll be expected to ask questions as well as give constructive feedback to your classmates.

1. **Agenda/Minutes based on four scheduled group meetings and peer evaluation (5%, due April 9th as a printed copy at the beginning of class)**

Your group will prepare four sets of agenda and minutes for four different group meetings and submit them along with the written proposal in the last class of the semester. You will also complete a peer evaluation of your group members in the last class of the semester.