

ENGINEER 4A03: ETHICS, EQUITY, AND LAW IN ENGINEERING.

Project: PART III

Read the entire project notes before starting to work on part 1. The reason is to ensure you start with the end in mind. This will avoid a scenario where you create a template that you cannot fill.

Section 1: Project Template Development.

Develop a comprehensive template designed for conducting an engineering project within the province of Ontario. This template should be in line with the field of engineering chosen for Parts I and II of the project (groups who changed field in part II will stick to the new field). The objective of this template is to ensure the following components are addressed for a given project:

1. **Decolonization and Indigenous Practices:** Integrate Indigenous engineering practices, where possible, into the project's framework, ensuring a harmonious blend with conventional engineering policies.
2. **Representation, Equity, and Diversity:** Promote representation, equity, and diversity by creating roles for underrepresented minorities within the project team and/or incorporating input from all minority users who stand to benefit from the project.
3. **Ethical Considerations:** Ensure the project adheres to high ethical standards, incorporating principles that safeguard the welfare of all stakeholders involved.
4. **Legal Compliance:** Adhere to legal requirements, encompassing engineering standards, municipal by-laws, and civil law. This includes safeguarding intellectual property introduced in the project to ensure legal protection.

Section 2: Application of the Template in a Hypothetical Project

Utilize the developed template to execute a hypothetical project in your chosen engineering field. The project should be designed to bring tangible benefits to a community located in or around the city of Hamilton, ON, or a community residing in or around the city of North Bay, ON. Conduct some research so as to ensure that there is practical application of the chosen project throughout its development and implementation phases.

The template should be made on a table. Landscape orientation. Max 3 pages Letter Size or A4 pages.

The filled template for section 2 should be limited to a maximum of 7 Letter size pages. References/Bibliographies do not count to page limit.

To enhance accountability and equality, all group members that contributed to the project should fill the **Group project participation form** and submit it together with this assignment.

Fill the form in MS Word, Convert to PDF and Attach this form as a PDF to the last page of your assignment. Your assignment is incomplete without the submission/inclusion of this form.

RUBRIC:

Criteria	Excellent	Good	Satisfactory	Needs Improvement	Unsatisfactory
Section 1: Project Template Development					
1. Decolonization and Indigenous Practices	Comprehensive provision for integration of Indigenous practices, demonstrating a deep understanding and seamless blending with conventional engineering policies.	Substantial provision for integration of Indigenous practices, with clear connections to conventional engineering policies.	Adequate provision for integration of Indigenous practices, with some alignment with conventional engineering policies.	Limited integration of Indigenous practices, with unclear connections to conventional engineering policies.	Little to no effort made to provide space to integrate Indigenous practices.
2. Representation, Equity, and Diversity:	Demonstrates outstanding creativity and thoughtfulness in providing for promoting representation, equity, and diversity. Well-defined roles for underrepresented minorities and substantial input from all minority users exhibit innovative approaches and deep consideration.	Displays proficient creativity and thoughtfulness in providing for promoting representation, equity, and diversity. Clear roles for underrepresented minorities. Input from minority users indicate a considerate approach.	Shows competent creativity and thoughtfulness in allowing for promoting representation, equity, and diversity. Some roles for underrepresented minorities.	Demonstrates moderate space for the promotion of representation, equity, and diversity..	Little to no effort made to enable for promoting representation, equity, and diversity. Lacks creativity and thoughtfulness.
3. Ethical Considerations	Provides for Exemplary adherence to	There is provision for Strong	Can allow for Adherence to ethical	Limited adherence to ethical	adherence to ethical

	high ethical standards, incorporating principles that thoroughly safeguard the welfare of all stakeholders.	adherence to high ethical standards, with clear incorporation of principles safeguarding the welfare of stakeholders.	standards, with some consideration for the welfare of stakeholders.	standards, with unclear consideration for the welfare of stakeholders.	standards is lacking.
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4. Legal Compliance	Allows for rigorous adherence to legal requirements, including engineering standards, municipal by-laws, and civil law, ensuring robust protection of intellectual property. Demonstrates critical thinking and consideration of multiple scenarios.	Provides for substantial adherence to legal requirements, engineering standards, municipal by-laws, and civil law, clear evidence of protection of intellectual property.	There is evidence of provision for adherence to legal requirements. Just enough to cover the bases.	Space limited for adherence to legal requirement.	Little to no adherence to legal requirements, putting the project at risk of legal issues.
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Section 2: Application of the Template

5. Utilization of Template in Hypothetical Project	Thorough application of the developed template. A demonstration of innovative thinking in how the template becomes a tool to make the project successful.	Effective application of the developed template, A clear connection is shown flowing from one project section to another.	The template is applied to an engineering project, showing some understanding of connections between different parts of a project.	Limited application of the developed template, with unclear demonstration of how it can be used in an elaborate project.	Little to no effort made to apply the developed template, lacking understanding of research-driven and professional guidelines.
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6. Research into Community Needs	Comprehensive research into the needs of the community, demonstrating a deep understanding of the community's requirements and priorities, influencing the project's development.	Substantial research into the needs of the community, with clear identification of requirements and priorities that inform the project's development.	Adequate research into the needs of the community, showing some understanding of requirements and priorities influencing the project.	Limited research into the needs of the community, with unclear understanding of requirements and priorities affecting the project.	Little to no effort made to research the needs of the community.
7. Practical Benefits to Community	Rigorous demonstration of significant benefits brought to the community. A thorough and detailed demonstration of the use of the template as a practical tool.	Detailed demonstration of benefits brought to the community. The template is demonstrated as a practical tool.	Adequate benefits brought to the community; Group demonstrates some emphasis on the practical application of the template's guidelines.	Limited benefits brought to the community, with unclear connection to the practicality of the project. If implemented.	No demonstration of tangible benefits brought to the community.