

## EME 50 Fall 2020 Topical Reports

EME 50 has traditionally included closed-book midterm and final exams based on the lecture materials. Because of the impracticality of assigning closed-book exams in a distance-learning context, we will be replacing these exams by two Topical Reports. The ability to compose clear, concise, well-organized, analytical reports is a key career skill for practicing engineers, and these assignments will allow you to hone your technical writing skills.

The aim of the reports is to provide you an opportunity to investigate a manufacturing process of your choice in greater depth. These reports should be analytical in nature, and not merely descriptive. They can, for example, contrast and compare the chosen process with other possible processes in terms of achievable part tolerances, part strength and durability, required capital investments, fabrication costs, waste generation, environmental impact, product lifecycle considerations, and other key considerations.

The minimum requirements for these reports are as follows:

1. Title page with report title, date, author name, and EME 50 section number.
2. Abstract, providing a summary of the goals, key findings, and recommendations of the project.
3. Introduction: an overview of the project, adopted methodology, organization, and key findings of your investigations.
4. Methodology: describe the information sources you have consulted, and how you assessed and analyzed the information gathered from them.
5. Analysis: describe the comparative merits and shortcomings of the manufacturing process, and identify possible product categories for which it is appropriate and those for which it is not.
6. Conclusion: summarize the key findings and recommendations of your investigation.
7. References: cite the information sources you have consulted with proper bibliographic details (more references are better, but if you choose a highly specialized topic for which only a small number of sources are available, state so in your report).

The paper must employ resources beyond the class lecture materials. It should be 1500-2000 words in length, not including the references, and should be submitted by Canvas upload as a pdf file.

**Plagiarism:** the paper must be written in your own words and reflect your own analysis and perspectives. It is fine to consult various websites, but copying text verbatim from them is not permitted. Figures from websites may be used, but proper credit must be given in the figure caption (if you have generated the figure yourself, state so in the caption). Submitted papers will be run through the “turnitin” plagiarism detection tool ([turnitin.com](https://turnitin.com)) and positive outcomes will result in severe grade penalties.

**Topical report #1:** assigned Oct. 14, 10 am and due Nov. 11, 1 pm Canvas upload.

**Topical report #2:** assigned Nov. 11, 10 am and due Dec. 9, 1 pm Canvas upload.