Ateneo de Zamboanga University
Fr. Eusebio, SJ Campus, La Purisima St. Zamboanga City
College of Science, Information Technology and Engineering

MAJOR OUTPUT (FINALS)

A. GENERAL INSTRUCTIONS

- For the final term, CE 107 students are expected to conduct a case study on how geology-related factors affected any civil engineering structure. The case should real-life scenarios or examples like the case of the *Leaning Tower of Pisa.* (Use other examples, do not use this structure.)
- The output shall be submitted individually on/or before **May 24, 2025**. **LATE OUTPUTS WILL NOT BE ACCEPTED.**
- **AI-GENERATED OUTPUTS WILL BE MARKED ZERO.** Always practice academic integrity and use AIs responsibly.

B. SUBMISSION FORMAT

- All outputs shall be submitted in **PDF Format** via Google Classroom.
- Outputs shall be in **LETTER SIZE** (8.5”x11.0”).
- Font style shall be in Arial, Tahoma, or Times New Roman, size 11.
- Normal Margins (1” all sides) with Justified text and double spacing.

C. CONTENT FORMAT

Title Page: A clear and concise title reflecting the case study.

Example: Geological Challenges and Engineering Solutions: The Stabilization of the Leaning Tower of Pisa

Abstract: A brief summary (150-250 words) covering:

- The problem (geological issue).
- Why it was significant.
- The solution implemented.
- The impact of the solution.

Introduction

- Brief background of the case study location/project.
- Importance of geology in civil engineering.
- Why this case study is relevant.

The Problem: Geological and Engineering Challenges

- Description of the geological conditions (e.g., soil type, rock structure, faults).
- How these conditions led to engineering problems.
- Any historical context (e.g., when the issue started).

Investigation and Analysis

- Methods used to assess the problem (soil testing, geotechnical surveys, monitoring).
- Findings from the geological and engineering studies.

Engineering and Geotechnical Solutions

- Proposed solutions and why they were chosen.
- Implementation of the solutions (construction techniques, materials used).
- Challenges faced during execution.

Results and Impact

- How the solutions improved the situation.
- Data on stability improvements, safety measures, or economic benefits.
- Long-term effectiveness of the solution.

Lessons Learned

- Key takeaways for civil engineers and geologists.
- Best practices for preventing similar issues in future projects.

Conclusion

- Summary of key points.
- Final thoughts on the importance of geology in civil engineering.

References

- Citations of reports, studies, and articles used.
- Use APA Citation Format