Generic Thesis Outline

• Introduction
  o Problem
  o Summary of approach to solve the problem
    ▪ Overview of how the approach would work
    ▪ Benefits of the approach / why it will work
  o Goals and Objectives
    ▪ Goals: Intangible, overall goal, not specifically achievable within the research project itself “improve bridge safety and reliability”
    ▪ Objectives – what will actually be accomplished in the specific project, specific tasks or achievements “Identify optimal environmental conditions for thermographic testing of bridges”
  o Outline of document
    ▪ Indicate what the chapter are that follows, and generally what is contained in those chapters.
    ▪ “Roadmap” that tell the reader where to find information

• Background
  o Description of the approach or technology
    ▪ Overview of the technology to be used
  o Prior art / Literature Search
    ▪ Describe other approaches or previous work using the same approach to solve the described problem
  o Theoretical Foundation
  o Additional data on the problem, and how the research will address the problem
  o Rationale for experiments to be conducted
    ▪ Identify technical challenges and unknowns that will be addressed through the experiments.

• Experiment
  o Test design
    ▪ Materials tested
    ▪ Figures and diagrams of test set-up
    ▪ Location of testing
    ▪ Loading and patterns
    ▪ Data collection and analysis procedures
  o Test Matrix (if applicable) or Description
    ▪ Test procedures and / or methods completed during the research using that materials, test set-up, loading and patterns, and data collection processes described.
    ▪ Number of tests of each type

• Results
  o Results of each test described in Experiments section
  o Analysis of results

• Conclusion
  o Review Goals and Objectives of the research
  o Review of analysis of results (what was shown through the testing described in the Results section)
  o Conclusions based on the results
    ▪ Should answer to each of the Objectives
  o Additional research needed to meet Goals