I. **Introduction of the following: (1 Slide)**
   A. Name – Jonathan Torch
   B. Major – Architectural Engineering – Structural Option – B.A.E./M.A.E Candidate
   C. Project – Columbia University Northwest Science Building
   D. Faculty Advisor – Dr. Ali M. Memari

II. **Briefly Go Over Outline of Presentation (1 Slide)**
   A. Existing Building Statistics
   B. Description of Thesis Proposal for Spring 2010 Semester
      a. Goals
      b. Includes Existing Lateral System Analysis
      c. Includes Lateral System Redesign
      d. Building Enclosure Breadth
      e. Architecture Breadth
   C. Conclusions

III. **Discuss Existing Building (3 Slides)**
   A. Building Statistics
   B. Building Architecture
   C. Building Structure
   D. Zoning Requirements
   E. Applicable Codes

IV. **Introduce Thesis Proposal (2 Slides)**
   A. Explain Structural Depth
   B. Building Enclosure Breadth Brief Description
   C. Architectural Breadth Brief Description
   D. Discuss Main Goals of Thesis Proposal

V. **Existing Lateral Analysis for Miami, FL (2 Slides)**
   A. Calculation of Wind Forces (Miami, FL)
   B. Wind Drifts, Story Drifts, Overturning, & Strength Checks

VI. **Lateral Redesign for Miami, FL (3 Slides)**
   A. ETABS Model Creation
   B. Frame Sketches, Initial Analysis, & Finalized Analysis

VII. **Building Enclosure Breadth (4 Slides)**
   A. Goals of Building Enclosure Breadth
   B. Discuss Existing Curtain Wall System
   C. Explain R-value, Condensation, & Air Leakage Analysis Results
   D. Bare Material (Insulation) Cost Analysis
   E. Conclude on Breadth Study

VIII. **Architectural Breadth Study (6 Slides of Images)**
   A. Goal of Architectural Breadth
   B. Briefly Describe Existing Exterior Architecture of Building
   C. Proposed Architecture for Miami, FL
   D. Conclude on Breadth Study

IX. **Conclusion of Senior Thesis (1 Slide)**
   A. Reinroduce Proposed Goals of Thesis Spring Semester 2010 (Conclude on Each Goal)

X. **Acknowledgements (1 Slide)**
   A. Thank everyone that made this senior thesis project a positive learning experience.