**Senior Design Presentation Template (Thirty Minutes w/50 +/- 5 Slides)  
Dr. Kamal Sarkar  
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Rev B**

1. **Opening Slide (Project Title, Team Members, Faculty Advisors, & Presentation Date)**
2. **Outline**
3. **Problem Formulation (Seven Minutes)** 
   1. **Elevator Speech**
   2. **Market Research (Background Research, Market Size, etc.)**
   3. **Competitive Products**
   4. **Needs, Wants, & Constraints**
   5. **Goals & Objectives**
   6. **QFD (Quality Function Deployment or House of Quality)**
4. **Concept Selection (Eight Minutes)**
   1. **Methodology**
   2. **Concept Generation/Potential Solutions**
   3. **Functional Decomposition**
   4. **Sub-functions**
   5. **Design Constraints for Each Sub-function**
   6. **Concept Variants for Each Sub-function**
   7. **Selection Process by Pairing Method for Each Sub-function**
   8. **Final Selection of All Sub-components**
   9. **Proposed Solution**
   10. **Detailed Drawings with Dimensions, Units, & Labeling**
5. **Design Embodiment (Ten Minutes)**
   1. **Proposed Design Highlighting Critical Features and Components**
   2. **Engineering Analyses**
      1. Assumptions, Equations, Parameters of Interest, Boundary and Initial conditions
      2. Solution Strategies & Methods (Analytical, FEA, etc.)
      3. Solutions, Results, & Related Graphs
      4. Final Choices for Materials, Dimensions, & Pertinent Key Parameters
   3. **DfX** 
      1. Design for Manufacturability
      2. Design for Safety
      3. Design for Environment, Reliability, Maintainability, etc.
   4. **Bill of Materials**
   5. **Engineering Economics**
      1. Cost for Prototype
      2. Production Cost
   6. **Manufacturing Process Details**
6. **Design Validation (Five Minutes)**
   1. **DFMEA**
   2. **Test Protocols**
7. **Design Documents**
   1. **Engineering Calculations**
   2. **Manufacturing Process**
   3. **Various Manuals (User’s, Maintenance, Operations, etc.)**
   4. **Test Protocols**
8. **Summary (Thirty Seconds)**
9. **References**
10. **Additional Supporting Slides (Critical for Q&A Section)**