EECS 486 Object Oriented Methodology
Project 2 Design Document Description

Possible Points: 100 **Assigned Date: 18MR03**
Due Date: 01AP03

The objective of the Project 2 Design Document is to fully describe the implementation of the system prior to writing any code. The Design Document is a system- and class-level view of the implementation focusing on *how* the code is implemented. Recall that *what* the system does was described in the Requirements Document.

The approach of the description is to first, include the class diagram from the Requirement Document to set context. Next, architectural models are included to describe both physical software and physical hardware deployment. Finally, the project is decomposed into individual classes with a thorough description of each class's constituents.

As always, the content of the design document is described on the following page(s). In general, the form is to first describe the notation of the diagram type. Next, the diagram for the group's specific application is given. Finally, the diagram for the system is textually described in full.

Notes:

- *Approximately 3/4 of the points are awarded for content and 1/4 of the points are awarded for form.*
- *Document must describe behavior of at least two classes using Statechart Diagrams.*
- *Document must describe behavior of at least four operations using Activity Diagrams.*

Project 2 Design Document Grading Template

- Introduction (can be cut and paste from Proj2 Req Doc) — 5 pts
  - Overview
- System Level Design
  - Structural Model (can be cut and paste from Proj2 Req Doc) — 45 pts
    - Notation Description — 5 pts
    - System Level Class Diagram — 5 pts
    - Class Diagram Description — 5 pts
  - Software Deployment
    - Notation Description — 5 pts
    - Component Diagram — 5 pts
    - Component Diagram Description — 5 pts
  - Hardware Deployment
    - Notation Description — 5 pts
    - Deployment Diagram — 5 pts
    - Deployment Diagram Description — 5 pts
- Class Level Design — 45 pts
  - Class
    - Field Description — 2.5 pts
    - Activity Diagram Notation Description — 2.5 pts
  - Class 1..n — 40 pts
    - Name
    - Description/Responsibilities
    - Behavioral Model (if behavior is complex enough to justify)
    - Attributes
      - Attribute Dictionary Entry
      - Attribute 1..m
        - Name
        - Description
        - Type (e.g., int, real, long-real, enumerated, …)
        - Units (e.g., deg F, meters, …)
        - Range
        - Resolution
    - Operation
      - Operation Dictionary Entry
      - Operation 1..p
        - Name
        - Description
        - Output (must have Attribute Dictionary Entry)
        - Input (must have Attribute Dictionary Entry and ref to owner)
        - Behavioral Model (if behavior is complex enough to justify)
- References — 5 points