**Objective:**

To demonstrate understanding of the relationship between systems and their components, specifically indentured hierarchies of systems, subsystems, components, and interfaces.

To develop and an operational sequence diagram for a complex operation with sequential and simultaneous tasks.

**Lab Assignment & Deliverable**

**This is a Lab Group Exercise**

1. Develop an Indentured Equipment List (Ericson, Ch9) for the Diesel Fire Pump located in the FPST lab. The IEL should be organized in a table or spreadsheet, and contain the following elements:
   1. The major subsystems of the fire pump assembly
   2. The dominant and subordinate components and their functions, energy sources, and phases.
      1. The level of detail should be down to the component failure point or replacement point.
   3. The interfaces, identified by category
      1. Hardware
      2. Software
      3. Human
2. Develop an Operational Sequence diagram (Ericson Ch 11) for a fire pump flow test.
   1. Use a table or diagram that shows “Swimlanes” of parallel steps as a function of time.
   2. Use appropriate symbols and links to depict operations and tasks as described in Ericson, Ch 11.

**Deliverables**

* A single document in pdf that shows each table and diagram on a separate page
* Tables and diagrams must be generated electronically (no hand drawings)
* Appropriate headings and labels
* Each student’s full name should be at the top of page