**EE474/574 FINAL PROJECT DETAILS (DRAFT VERSION 1.0)**

**LMS Submission Deadline:** 30December 2019 at 9:40

**Presentations:** 30 December 2019 between 09:40-12:30

**Group:** You are allowed to create a group of maximum 3 people

1,2,3 in a group people are allowed. 4 or more people in a group is NOT allowed

**Names of the people in a group should be submitted by an email by December 9th, 2019. One email for each group is enough.**

**PROJECT SCOPE**

1. You are expected to create a graphical user interface (GUI) on MATLAB
2. The GUI should read the excel file
3. The user can select one of three options to run
   1. Unit Commitment only
   2. Economic Dispatch only
   3. Unit Commitment and Economic Dispatch together
4. After the calculations are done, results should be given on the GUI. Minimum expectations are below. You are free to present more data on your interface.
   1. Unit Commitment:
      1. A chart to represent which units are ON for each hour
      2. A chart to represent which units start up at each hour
      3. A chart to represent which units shutdown at each hour
      4. A chart to represent total demand and the total maximum capacity committed from the units for each hour
   2. Economic Dispatch
      1. A stacked bar chart to represent the amount dispatched from each generator for each hour
      2. A chart to present hourly electricity price (the price of last accepted offer)

**GRADING**

Final Project has a weight of 25% for the letter grading.

Successful solution of each option receives 5 points. (Total 15 points)

Having an acceptable GUI receives 3 points

Having all expected charts on the GUI receives 5 points.

Being present at the time of presentation receives 2 points.

**THE PROBLEM**

The parameters of each generator should be read from an excel file. You need to decide what parameters are needed to complete this project.

A power system consists of **maximum** 7 generators should have been solved by the program. The program should work even if less than 7 generators are defined in the excel file.

The expectation during the presentation will be: changing the parameters on the excel file and rerun the program successfully. NOTE: Don’t write the parameters on the MATLAB code. GUI should have a browse button to choose which excel file to read.