To: ENRG 132 project teams
From: Frank O. Simpson, President, First-Order Systems, Inc.
Date: April 8, 2019
Re: Final Technical Brief for the SCGL project

First-Order Systems, Inc.
An Engineering Company

Your help so far has been invaluable to our organization. We have learned a tremendous amount about our testing protocols, equipment, and data analysis, and you have admirably filled in for our lead analyst while she is away on active deployment. For this, we cannot thank you enough.

As the SCGL project moves toward its conclusion, it's important for you to understand our expectations for your submission of a final technical document. Here are the guidelines for what your final technical brief should include:

- A clear description in plain English (not code or pseudocode) of your algorithm for parameter identification. I understand that you have completed the project in MATLAB, but please write this description using platform-neutral language (our engineers may eventually code your procedure using another platform). Do not reference specific MATLAB commands or processes; instead write the description in a generic way.
- A concise description of your parameter identification results. Include a figure of your final regression results, as well as a table of the mean and standard deviation of the time constants for each FOS model. Be sure that the table and figure are formatted professionally and suitable for communication of information to a technical audience.
- A 1-2 paragraph summary that answers the core questions we originally posed to you:
    - How can you characterize the error in this process? Please comment on the quality of the experiments themselves, and also on your parameter identification algorithm. Use evidence to support your case, including specific data from your analysis and outside references as appropriate.
    - What can FOS honestly say about our products in terms of their performance, pricing, and manufacturing consistency?
- If you have used outside references, please list them at the end of the memo in reference format of your choice (but use a consistent format throughout).

The memo **should not exceed 2 pages of text including references**, although figures or tables may go on to the third page. *Under no circumstances are you allowed to exceed three total pages.* You should compose your draft according to the guidance provided on the *technical brief template* provided by your instructor.

Your final technical brief will be submitted in two stages:

- You will submit a draft version to your instructor before the start of Class 30, and ***make sure all team members have a copy of your document on their computers in Class 30*** so that you can get feedback.
- You will submit the final version of the technical brief before the start of Class 32. That draft should certainly integrate any feedback you receive in Class 30, and it should be a professionally-composed description of your work on this project.

Thank you as always, and we look forward to seeing your final technical brief.