

University of California, Davis
Department of Biomedical Engineering

Fall 2024 Advanced Design of Experiments BIM 283
David M. Rocke for Biomedical Engineers February 27, 2024

Homework Assignment 6

Due March 12, 2024

The data for problems 6.1, 6.2 and 6.9 are in the zipped data file.

A useful set of tables of fractional factorials can be found in the on-line Engineering Statistics Handbook of NIST here: [NIST Fractional Factorials](#).

- Do problem 6.1 in the text.
- Do problem 6.2 in the text.
- Do problem 6.3 in the text. See table 6.14b.
- Do problem 6.5 in the text. There is one obvious way to obtain a half fraction as indicated.
- Do problem 6.9 in the text.
- Do problem 6.16 in the text. This is similar to the bicycle example.
- Do problem 6.19 in the text. To refine the design requirements, 1) no two main effects should be confounded; 2) The two interaction effects defined to be of interest should not be confounded with a main effect or with each other, but may be confounded with other two-factor or higher interactions.