University of California, Davis
Department of Biomedical Engineering

Fall 2026	**Advanced Design of Experiments**	**BIM 283**
David M. Rocke	**for Biomedical Engineers**	**March 2, 2026**

Take-Home Final Examination

Due March 13, 2026

The data for problems 6.1 and 6.9 are in the zipped data file. The problems are to be done on your own, but I am always willing to answer questions.

You probably won't need this resource for the exam, but 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 6.3 in the text. See Table 6.14b.
- Do problem 6.9 in the text.
- 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.