

### Course Information

<b>Class Meetings:</b>	Tuesday and Thursday 10:00am–11:50am 1060 Bainer
<b>Office Hours:</b>	Tuesday 1:00pm–2:00pm, 140B Med Sci 1C Or by appointment, in person or on Zoom.
<b>Office:</b>	140B Med Sci 1C Cell: 530-304-1019 e-mail: <a href="mailto:dmrocke@ucdavis.edu">dmrocke@ucdavis.edu</a> web site: <a href="http://dmrocke.ucdavis.edu/">http://dmrocke.ucdavis.edu/</a> Email list: <a href="mailto:bim283-w25@ucdavis.edu">bim283-w25@ucdavis.edu</a> Canvas site: BIM 283 001 WQ 2025
<b>Required Text:</b>	<b>Statistics for Experimenters, Second Edition.</b> Box, GEP, Hunter, JS, and Hunter, WG, Wiley, 2005.
<b>Software:</b>	Lectures and homework will utilize R for computation.
<b>Course Grading:</b>	Letter Grades based on – Homework – Exams Possible Projects
<b>Prerequisites</b>	It is assumed that the student has taken at least one introductory statistics class. –

This course covers design and statistical analysis of experiments in biomedical engineering after a refresher in basic statistics. We will cover concepts and methods of experimental design such as randomization, blocking, covariate adjustment, and factorial designs. We will also cover methods specific to common biological assay types such as PCR, mass spectrometry (proteomics and metabolomics), immunoassays, and RNA-Seq.