

Course Information and Policy
Statistics 514, Design and Analysis of Experiments, Spring 2025

Time and Location

MWF 11:30 am – 12:20 pm WALC 3121 & 12:30 pm - 1:20 pm WALC 2124

Instructor: Bowei Xi

Office: MATH 218

My Office Hours: Wed 1:30 pm-2:30 pm

TA Office Hours: By appointment

Email: xbw@purdue.edu

TA Email: Qihui Feng, feng182@purdue.edu

Prerequisite

A good introductory course that covers probability distributions, sampling distributions, mean, variance, hypothesis testing, Z-test, t-test, two-sample paired t-test, two sample independent t-test, one-way ANOVA and simple regression.

Textbook

Design and Analysis of Experiments by Montgomery (**10**th Editions)

Course Outline

Overview and Basic Principles (Chaps 1-2)

Simple Designs and Analysis of Variance (Chap 3)

Block Designs, Latin Squares and Related Designs (Chap 4)

Full Factorial Designs (Chap 5)

Designs with Random Factors and Nested Designs (Chaps 13-14)

2-level Full Factorial and Fractional Factorial Designs (Chaps 6-8)

Homework and Exams

There are one midterm exam and one final group project.

Every homework assignment will be posted online on **Brightspace** on Fri morning, and due next Fri by 4pm. Please scan your homework into a pdf file and submit online to **Brightspace**. I will post the solution on **Brightspace1** after the due date. My hope is that the graded homework will be returned by the grader within one week. Late homework will not be accepted under any circumstances (late = online submission link closed). To allow for illness, family emergencies, conference travel, etc., your lowest homework grade will be dropped.

Grading Policy

Homework 40%; Midterm 30%; Final 30%

Your final grade will be determined by taking your received total percentage to the following scale: [90, 100+)=A, [80, 90) =B, [65, 80) =C, [50, 65) =D, below 50=F. Plus and minus will be assigned approximately every 3 points.

My Website for Stat514

The website contains all the course materials, including Course Information, SAS Information, Lecture Notes, Homework and Exam Material, Data Sets, SAS Templates, and Announcements.

- o **Lecture Notes** usually are pdf files. They are posted online.
- o **Homework** contains homework assignments.
- o **Solution is the only thing posted on Brightspace**
- o **Exam Material** has midterm exam material later in the semester.
- o **SAS Templates** contains important SAS programs that are used in class and can serve as templates for homework.
- o **Data Sets** contain data sets in plain text format.