

## Course Information

**ABE 50300**

***Microparticulate Surface Interactions and Powder Performance***

CRN: 25745

Meeting day and times:

Lecture – Tuesday & Thursday 10:30 am – 11:20 am ABE B053

Practice: Friday at 1:30-3:20 pm ABE B053

Online sessions when indicated: <https://purdue-edu.zoom.us/j/8146066312>

Course credit hours: 3.00

Course Brightspace page: Fall 2025 ABE 50300

Prerequisites: Senior permission from the instructor

## Instructor Contact Information

Instructor: Prof. Teresa Carvajal

Office: ABE 2022

Phone: 765-496-6438

E-mail: [tcarvaja@purdue.edu](mailto:tcarvaja@purdue.edu) (preferred)

Office hours: By appointment, request by email, at least 48 hours in advance.

## Course Description

This three-credit course focuses on the application of surface analytical technologies to assess the physical and chemical factors governing particulate interactions in food, pharmaceutical (drug and nutrient delivery), and environmental systems (soil, aerosols, and water). The processing of solids and liquids in the food, biological, and pharmaceutical industries presents unique challenges related to design and operation. Students will gain an understanding of the physicochemical and surface properties of materials and how these influence their behavior during processing, with an emphasis on both concepts and practical applications.

Typically offered: Fall