Many products are either in particulate form or involve particulate materials during their manufacture. Examples include pharmaceuticals, agro-chemicals, and consumer products. A wide variety of unit operations are encountered when processing such materials. Understanding the fundamentals of these unit operations is helpful for proper system design and operation.

The goal of this course is to familiarize participants with unit operations in storage, feeding, conveying, blending, and particle size enlargement and reduction. This course includes discussion of both fundamental and practical application of unit operations. This course will be particularly useful for engineers and technicians who do not have a background in particle technology.

At the conclusion of the course, participants should be able to:

1. Articulate the unique difficulties associated with the design and operation of particulate processes and the reasons for these difficulties;
2. Describe the purpose and physical principles of many unit operations commonly found in particle processing industries; and
3. Define important particle properties involved in the material transformations during these unit operations.

The topics covered in this 1.5-day lecture and laboratory short course include:

**Day 1**
- Storage
- Feeding and conveying
- Blending

**Day 2**
- Particle size enlargement
- Particle size reduction
- Pilot plant tour

CP3 is a research and education center for the manufacture of particulate products including agricultural chemicals, consumer goods, energetic materials, foods and feed, pharmaceuticals and specialty chemicals.

For more information, contact:

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Tel: 765-494-6599

Cost to take this short course: $800.
Cost to take both short courses*: $1500.

*Characterization (4/23-24) and Unit Operations short courses (4/24-25) do not overlap.