



Powder and Bulk Solids Academy: Basics of Bulk Solids Handling, Flow, and Air Filtration Schedule

Day 1 - March 23, 2021

9:00 am	Welcome	Todd Smith, Kansas State University
9:20 am	Introduction to flow issues, mass flow and funnel flow - demonstrations	Karl Jacob, University of Michigan
10:00 am	Segregation mechanisms	Karl Jacob, University of Michigan
10:30 am	Break	
10:40 am	Flow properties and how we measure them	Karl Jacob, University of Michigan
11:30 am	Flow properties and practical hopper design	Karl Jacob, University of Michigan
12:15 pm	Break	
12:20 pm	Discharge rate from bins	Karl Jacob, University of Michigan
12:35 pm	Flow aid devices	Karl Jacob, University of Michigan and Todd Smith,
1:00 pm	Conclusion of day 1	Kansas State University

Day 2 - March 25, 2021

9:00 am	Recap from day 1	
9:15 am	Dust collection and particulate air filtration systems	Pat Mahoney, Coperion K-Tron
9:55 am	Demonstration of air filters	Pat Mahoney, Coperion K-Tron
10:15 am	Valve sizing and selection Demonstration of valves	Justin Christency, Vortex Valves
11:00 am	Break	
11:15 am	Feeders - rotary valves, screw conveyors, volumetric, and gravimetric	Brandon Dohn, Coperion K-Tron
12:15 pm	Demonstration of feeders, rotary valves, and screw conveyors	Pat Mahoney, Coperion K-Tron
1:00 pm	Conclusion of day 2	

Schedule is subject to change. A final schedule will be provided to attendees on course start date.

All times are in Central Time Zone.



Day 3 - March 30, 2021

9:00 am	Recap from day 2	
9:15 am	Truck and railcar unloading	Todd Smith, Kansas State University
9:30 am	Demonstration of devices for handling small bags, bulk bags, boxes, and drums	Todd Smith, Kansas State University
10:15 am	Size reduction, grinders, and mills	Eric Marcotte, Stedman Machine Co.
11:00 am	Break	
11:15 am	Particle enlargement, agglomeration, granulation	Jack Keeney, Bepex
12:00 pm	Sifters and screeners	Steve Schmidt, Rotex
12:45 pm	Conclusion of day 3	

Day 4 - April 1, 2021

9:00 am	Recap from day 3	
9:15 am	Level and inventory measurement of solids	Nathan Grube, BinMaster
10:00 am	Mixers and mixing	Kevin Solofra, Kansas State University
10:45 am	Break	
11:00 am	Comparison of mechanical conveying methods	Don Mackrill, Spiroflow Inc.
12:00 pm	Demonstrations comparing various pneumatic conveying methods	Todd Smith, Kansas State University
12:45 pm	Course conclusion and evaluation	Todd Smith, Kansas State University

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