

ALE3D Introductory Class Agenda

PST	Mon (7/8)	Tue (7/9)	Wed (7/10)	Thu (7/11)	Fri (7/12)
8:00	ALE3D Code Capabilities File check - make sure everyone has notes and examples BREAK AT 8:50	Mesh Generation Part II - How to combine mesh objects into more complex geometries BREAK AT 8:50	Explicit Hydro - Multisphere Impact Example BREAK AT 8:50	Slide/Contact Surfaces - two-sided and autocontact BREAK AT 8:50	Element Erosion - options for pure Lagrange Hydro simulations BREAK AT 8:50
9:00	What is ALE Overview of ALE3D workflow How to run on Windows/Mac/Linux BREAK AT 9:50	Mesh Generation Part III – External Mesh Generation Options such as Cubit BREAK AT 9:50	HE Burn: Explosively Formed Projectile Example BREAK AT 9:50	Material Models - General theory and ALE3D material views	Smoothed Particle Hydro (SPHERAL) - How does this work, how to use it, how to do visualization of the results
10:00	Running ALE3D - Taylor Impact BREAK AT 10:50	Shaping Material onto Background Mesh Part 1 - How to shape in basic geometries BREAK AT 10:50	Mesh Relaxation and Advection Part I - Basic Overview BREAK AT 10:50	BREAK at 10:00 MATVIEW Discussion - a tool for exploring material models BREAK AT 10:50	BREAK at 10:00 Embedded Grids Part I - FEusion implementation in ALE3D for meshes overlapping in space BREAK AT 10:50
11:00	Mesh Generation Part I - How to create basic geometries like spheres, cylinders, and boxes	Shaping Material onto Background Mesh Part II - How to shape in more complex geometries	Mesh Relaxation and Advection Part II - More in-depth discussion on control options	Troubleshooting - how to understand why ALE3D crashed and how to recover	Embedded Grids Part II - Build an input file from scratch as a class, run it, debug it, and see how to visualize it
12:00 - 2:00	TWO HOUR BREAK - time to stretch, get sustenance, and test out some of those new skills				
2:00	VisIT tutorial Office Hours - get your questions answered by a developer	Office Hours - get your questions answered by a developer (1 on 1 if needed)	Office Hours - get your questions answered by a developer (1 on 1 if needed)	Office Hours - get your questions answered by a developer (1 on 1 if needed)	Questions? Please email the team at ale3d-help@llnl.gov

ALE3D Introductory Class Agenda

- Day 1 (Monday)
 - Hour 1
 - Section – Overview
 - Examples – N/A
 - Hour 2
 - Section – Tutorial
 - Examples – N/A
 - Hour 3
 - Section – Taylor Impact
 - Examples – ALE3D_Intro_Examples/Taylor_Impact_Example/tay2d.ain
 - Hour 4
 - Section – Mesh Generation
 - Examples
 - ALE3D_Intro_Examples/Mesh_Examples/Taylor_Mesh/taymesh.gin
 - ALE3D_Intro_Examples/Mesh_Examples/SpherePlate_Mesh/sphplatemesh.ain
 - ALE3D_Intro_Examples/Mesh_Examples/HE_Platter_Mesh/heplatter_l.ain

ALE3D Introductory Class Agenda

- Day 2 (Tuesday)
 - Hour 1
 - Section – Mesh Generation
 - Examples – ALE3D_Intro_Examples/Mesh_Examples/...
 - Hour 2
 - Section – External Mesh
 - Examples – N/A
 - Hour 3
 - Section – Shape Generation
 - Examples
 - ALE3D_Intro_Examples/Shape_Example/example1_dumbbell/exercise_dumbbell.ain
 - ALE3D_Intro_Examples/Shape_Example/example2_heplatter/exercise_heplatter.ain
 - Hour 4
 - Section – Shape Generation
 - Examples
 - ALE3D_Intro_Examples/Shape_Example/example3_bullet/exercise_bullet.ain
 - ALE3D_Intro_Examples/Shape_Example/example4_dice/exercise_dice.ain

ALE3D Introductory Class Agenda

- Day 3 (Wednesday)
 - Hour 1
 - Section – MultiSphere Impact
 - Examples – ALE3D_Intro_Examples/MSphere_Impact_Example/msphere.ain
 - Hour 2
 - Section – HE Platter
 - Examples – ALE3D_Intro_Examples/HE_Platter_Example/heplatter_lag.ain
 - Hour 3
 - Section – Advection
 - Examples – ALE3D_Intro_Examples/Advection_Examples/advection.ain
 - Hour 4
 - Section – Advection
 - Examples – ALE3D_Intro_Examples/HE_Platter_Example/heplatter_ale.ain

ALE3D Introductory Class Agenda

- Day 4 (Thursday)
 - Hour 1
 - Section – Slides
 - Examples – ALE3D_Intro_Examples/Steven_Test/steven.in
 - Hour 2
 - Section – Material Models
 - Examples – N/A
 - Hour 3
 - Section – Matview
 - Examples – ALE3D_Intro_Examples/Matview_Example/...
 - Hour 4
 - Section – Troubleshooting
 - Examples – N/A

ALE3D Introductory Class Agenda

- Day 5 (Friday)
 - Hour 1
 - Section – Erosion
 - Examples – ALE3D_Intro_Examples/Element_Erosion_SPH/erosion.ain
 - Hour 2
 - Section - SPH
 - Examples
 - ALE3D_Intro_Examples/Spherical/taylor_sph.ain
 - ALE3D_Intro_Examples/Spherical/ballplate_sph_2d.ain
 - ALE3D_Intro_Examples/Spherical/viper_sph.ain
 - ALE3D_Intro_Examples/Spherical/tp.ain
 - Hour 3
 - Section – Embedded Grids
 - Examples – Will be built in class
 - Hour 4
 - Section – Embedded Grids
 - Examples – Will be built in class