

Intermediate MCNP6

11–15 March 2024

OECD/NEA Headquarters in Boulogne-Billancourt, France

Minimum enrollment: 12; maximum enrollment: 24

This 4.5-day intermediate class is designed for people who have some experience in running MCNP Monte Carlo calculations, but who would like to refresh or advance their skills. Provided examples will be assembled, executed, and examined. Time will be available throughout the week to discuss individual questions and problems with MCNP experts. If time permits, details on more advanced features in the code can be discussed at the attendee's request.

Tentative Agenda

Day 1, 1000–1230; 1330–1700

- AM: MCNP History & Applications
- PM: MCNP Basic Input File Structure and Calculation Execution Review

Day 2, 0900–1230; 1330–1700

- AM: Advanced Geometry (e.g., hierarchical geometry, repeated structures)
- PM: Advanced Geometry Exercises

Day 3, 0900–1230; 1330–1700

- AM: Advanced Radioactive Source Terms
- PM: MCNP Intrinsic Source Constructor

Day 4, 0900–1230; 1330–1700

- AM: Advanced Tallies (e.g., perturbations, special tally treatments)
- PM: Advanced Variance Reduction with Weight Windows & DXTRAN

Day 5, 0900–1230

- AM: Advanced Output Processing & Visualization
- PM (Optional): Open Discussion / Questions and Answers

The class is based on version 6.2 of the MCNP code but can include discussion of MCNP6.3 topics and resources at the attendee's request. Students must provide their own laptop with MCNP6.2 or MCNP6.3 installed (with Windows installation tutorials [here](#) and [here](#), respectively).

More information on the MCNP code is available at mcnp.lanl.gov.