NE Fuel Performance Blurb

Provides the basic role of fuel in reactor operation and how the fuel impacts heat generation and transport to the coolant. The course includes an overview of different fuels and the fabrication processes required to construct nuclear fuel, including various fuel types and geometries. Thermal transport, mechanics, and thermomechanics affecting fuel behavior will be introduced, and methods to solve the governing equations numerically and analytically will be developed. Subsequently, changes in the fuel and cladding material that degrade the performance of the fuel will be examined. Finally, the knowledge gained throughout the course will be utilized to conduct fuel performance simulations with MOOSE.