

Learning *Objectives*

By the end of this course, participants will be able to:

- Identify and evaluate the physical and mechanical properties of key wood species (Mahogany, Spanish Cedar, White Oak, Plantation Teak, and Pucté) and their impact on structural stability, durability, and long-term building envelope performance.
- Compare the dimensional stability, moisture resistance, and decay performance of various wood species to determine appropriate applications for doors, windows, millwork, and exterior assemblies.
- Analyze how wood species selection influences emergency egress reliability, hardware alignment, and life-safety compliance in operable door and window systems.
- Assess how density, hardness, and movement characteristics affect impact resistance, wear performance, and occupant safety in high-traffic and exterior environments.
- Examine how moisture management strategies and finishing systems reduce risks of mold growth, air leakage, water infiltration, and indoor air quality concerns.

Learning *Objectives*

- Evaluate fire-performance considerations of hardwood species and understand their role in code-compliant design and rated assemblies.
- Differentiate between certified and non-certified wood sourcing practices and explain how FSC certification supports environmental welfare, legal compliance, and responsible material life cycles.
- Explain how sustainable forestry practices and conservation efforts contribute to long-term material availability and reduced environmental impact in architectural projects.
- Apply best practices for specification, fabrication, and installation to enhance structural integrity, durability, and lifecycle safety.
- Integrate wood species performance criteria into climate-responsive and sustainable design strategies that protect occupant health, safety, and welfare.