



# Modeling System Architectures Using the Architecture Analysis and Design Language (AADL)

Essential training for improved validation of real-time, embedded software systems

**Do you need to resolve application scheduling and resource conflicts?**

**Are you confident that your control system applications will perform after a move to a new platform?**

**Is your development practice robbing you of productivity?**

### Who Will Gain Most from this Course

- software/system architects and developers who
  - want a solid overview of system and software modeling
  - are considering options for engineering embedded, real-time systems
- individuals who
  - need to validate embedded, real-time system performance
  - make decisions about developing or acquiring real-time, embedded systems
- technical managers and other managers who looking for a solid overview of system and software modeling

Traditional approaches to modeling and validating real-time, embedded system qualities typically

- use low-fidelity software models that cannot be integrated
- do not allow developers to predict the impact of change
- leave unanticipated effects of design choices undiscovered until late in the development life cycle, when they are more costly to fix



### An Improved Approach—Model-Based Engineering

An architecture-centric, model-based engineering approach offers a better way to design, develop, analyze, and maintain system architecture. Using this approach, system architects and developers can

- reduce risk through early and repeated analysis
- reduce cost through fewer system integration problems and simplified life-cycle support
- predict system-wide impacts of architecture choices
- increase confidence by validating design assumptions in high-fidelity models



### SEI Course Prepares You to Use the Model-Based Engineering Approach

In the **Modeling System Architectures Using the Architecture Analysis and**



**Design Language (AADL)** course, you will learn how to use tools for model-based engineering. One tool is AADL, an international industry standard notation, designed for the specification and automated integration of architecture models for real-time, distributed systems. You'll also use other tools to perform quantitative validation of system qualities through analysis of the models built with AADL.

Through lecture, discussion, and exercises, you'll gain important skills, including

- building models using AADL
- modeling software and its mapping to the execution platform
- facilitating data analysis
- modeling multi-modal systems
- validating systems qualities through quantitative of its architecture

### For Course Registration

[www.sei.cmu.edu/training/p72.cfm](http://www.sei.cmu.edu/training/p72.cfm)

This course may also be offered by arrangement at customer sites. Email [course-info@sei.cmu.edu](mailto:course-info@sei.cmu.edu) or call +1 412-268-7622 for details.

Follow-up classes can be arranged to assist you in capturing your system architecture and applying critical analyses.