



# Introduction to Propulsion Simulation Using NPSS Winter Short Course

**Southwest Research Institute**  
**6220 Culebra Rd.; B209, EDO Training Room**  
**San Antonio, TX**

**December 2 – 5, 2025**

**Days 1 – 3: 8:30 to 4:30      Day 4: 8:30 – 12:00**

## Course Overview

NPSS is an object-oriented, multi-physics, engineering design, and simulation environment that enables the development, collaboration, and seamless integration of system models. It is primarily used in aerospace applications for modeling air and liquid propulsion systems and for the integrated analysis of aerospace vehicles. This introductory course is divided into seven modules that cover the basic concepts and features of NPSS. Each module is accompanied by hands-on exercises. After completing the course, the student will be able to create and run system models using the Introduction to Propulsion Simulation Using NPSS<sup>®</sup> Software. The course is intended for engineers responsible for modeling or analyzing the performance of thermo-dynamic and fluid/thermal systems.

Instruction provided by experienced SwRI staff who also serve on the NPSS development team.

## Cost

The short course cost is \$1,350 USD per registrant.

**Registration** includes four full days of course instruction, training material on a thumb drive, class exercises, and three lunches.

## Course Topics

- Introduction to NPSS
- Anatomy of an NPSS Model
- The NPSS Solver
- Variables, Arrays, and Tables
- Elements
- Functions
- Units
- Final Project: Develop Complete Model and Obtain Results

**For more information, please contact:**

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