



*Hands On, Measurable  
Training Programs*

## Advanced Abaqus Scripting

Course Code	SIM-en-SCRPT
Brand & Release	SIMULIA 2024
Duration	20 hours (5 x 4h class sessions)
Level	Advanced
Prerequisites	Experience scripting with Python and Abaqus is recommended.

### Objectives:

This seminar is offered as a follow-up to the Introduction to Abaqus Scripting course. It is a deeper dive into both Python and the Abaqus Scripting Interface and gives users more hands-on exposure with practically oriented workshops of moderate complexity. This course also provides pointers for more specialized and advanced topics.

### Class Structure:

Upon completion of this course, you will be able to:

- Help students to develop a high-level understanding of the Abaqus scripting capabilities and gain some proficiency.
- Develop scripts to automate and standardize repeatable pre/post-processing routines.
- Investigate and utilize Python's object-oriented framework to interact with the Abaqus Object Model.
- Customize your pre-processing experience through the creation of GUI plugins via the Real Simple GUI (RSG) framework.

This advanced seminar will take a deeper dive into:

- The Abaqus Scripting Interface (ASI)
- The core functionality of the Python language and libraries

### Class Lessons:

Lesson 1: Overview – Advanced Abaqus Scripting

Lesson 2: Python Core Language – Advanced Topics

Lesson 3: Functions, Modules, Packages & Performance

Lesson 4: Manipulating Strings and Files

Lesson 5: Object Oriented Programming

Lesson 6: Abaqus Scripting Interface – Post Processing

Lesson 7: Scripting Interface - Preprocessing

Lesson 8: Miscellaneous Topics

Lesson 9: Stretching Horizons

Lesson 10: Optional Topics