ITASCA CONSULTANTS S.A.S.
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"PYTHON IN ITASCA SOFTWARE" TRAINING COURSE

Duration :	7 hours Timetable: 2:30pm – 6:00pm CET (Paris) 7:30am – 11:00am (Chicago)
Location :	Online – Microsoft Teams Platform
Instructor :	Mr. Huy Tran Itasca Consultants, S.A.S.
Registration fees	€800,00 (excl. Taxes)
Audience	Engineers with an experience in numerical modeling
Pre-requirements	Pass the entrance test with 70% correct answers. Questions relate on numerical modeling and Python Language.
Teaching Methods	Our instructors have knowledge enriched at the rate of consulting studies they carry out for our customers. We value this knowledge by stimulating exchanges between professionals and promoting the sharing of learning within the group. The topics covered during the training are approached in an evolutionary way, from simple to more complex. All our training courses are based on: • Theoretical contributions: the instructors rely on a theoretical programming and numerical simulation approach. • Concrete cases: examples of applications made by Itasca to illustrate and apply the theory seen beforehand. Sharing practices and experiences: Sharing practices and experiences enhances and enriches the group.
Training Materials	• Theoretical contributions • Videos • Practical cases and scenarios Free exchanges with the group
Assessment Methods	The training will end with an individual test which will validate the knowledge acquired. The test will be a quiz composed of several questions on the topics covered during the training.
Objectives	Ability to use Python to extend modeling capabilities with the Itasca codes.

Outlines

1. Introduction to the Python Programming language in the Itasca Software.
    - Quick introduction to Python Fundamentals
    - Python/Itasca connectivity

2. Introduction to the Itasca Module
    - Object oriented Interface
    - Array Style programming with NumPy

3. Python applications and practical exercises on:
    - Parametric study.
    - Optimization for calibrating material properties.
    - Advanced post-treatment and visualization.
    - Creating a user interface with PyQt5.

4. Discussion and questions

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