QUANTITATIVE DATA ANALYSIS

Dept. Earth Sciences & Environment, University of Pavia

Schedule 2026

This is the provisional schedule and may be subject to change. Any changes will be announced in the lectures.

All lectures will be given on the zoom platform, starting at 10:00 CET.

	Date	Topic
		Part 1: Linear Least-squares
L01	10-Nov	Introduction, course aims, philosophy of least squares fitting.
L02	12-Nov	Accuracy vs precision. Linear LS theory, weighted-chi-squared.
HW1		Install EosFit program suite.
L03	17-Nov	Evaluating quality of fit: wchi2, residual patterns. Leverage.
L04	19-Nov	The source and meaning of parameter uncertainties.
QS1	Due 23-Nov	Introduction to EosFit-GUI and reporting esu's.
		Part 2: Non-linear least squares and PV EoS
L05	24 Nov	Theory of non-linear least-squares.
L06	26 Nov	PV EoS theory.
QS2	Due 31 Nov	Fitting PV data with EosFit-GUI and reporting results.
L07	1 Dec	Evaluation of results: which Eos order is best fit?
L08	3 Dec	EosFit architecture, error propagation with the VCV matrix
QS3	Due 9-Dec	Fitting PV EoS and evaluating results
L09	10-Dec	When and why LS fails for EoS
L10	17-Dec	Other applications of non-linear least-squares
Exam	tbd	Written 'take-home' exam