

Introduction to PyNIO and Related Python Tools for Geoscientific Data Analysis SHORT COURSE

SHORT COURSE ORGANIZERS AND INSTRUCTORS

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SUN 10 JAN

8:30 A.M.	ARRIVAL AND INTRODUCTIONS.
8:45 A.M.	SETUP AND TROUBLESHOOTING OF REQUIRED SOFTWARE ON LAPTOPS.
9:00 A.M.	INTRODUCTION TO DATA FORMATS USED IN CLIMATE SCIENCES.
9:30 A.M.	INTRODUCTION TO PYNIO.
10:00 A.M.	COFFEE BREAK
10:30 A.M.	DEMONSTRATION: <i>Using PyNIO to read a variety of data formats.</i>
11:15 A.M.	HANDS ON LAB: Students will be given sample datasets and asked to write PyNIO scripts to read data. If desired, students can use this time to write PyNIO scripts to read their own datasets of interest.
12:00 P.M.	LUNCH ON YOUR OWN
1:30 P.M.	INTRODUCTION TO GRIDS AND MESHES ENCOUNTERED IN CLIMATE SCIENCES.
2:15 P.M.	DEMONSTRATION: <i>Using PyNIO and other Python tools to read data, do simple computations, and generate publication quality two-dimensional visualizations.</i>
3:00 P.M.	COFFEE BREAK
3:30 P.M.	SIMPLE TASK PARALLELISM WITH PYTHON.
3:50 P.M.	HANDS ON LAB: Students will be given sample Python scripts that do a variety of simple and complex data analyses, visualizations, and task parallelism, with basic tasks to accomplish. More advanced students will be encouraged to further enhance or adapt these scripts for use with their own datasets. The lab instructors will wander around the room, helping students with individual questions.
5:15 P.M.	COURSE WRAP-UP, FINAL QUESTIONS ANSWERED
5:30 P.M.	SHORT COURSE ADJOURNS