

## PhD programme in Earth, Environmental and Resources Sciences

Instructor(s)	Enrica Viparelli and Andrea Fildani, DiSTAR - UNINA
Course Title	Sediment transport mechanics from products to processes
Total Number of Hours	12
Contact Email	<a href="mailto:eviparelli@unina.it">eviparelli@unina.it</a> , <a href="mailto:andrea.fildani@unina.it">andrea.fildani@unina.it</a>

### Course Description

The students will be exposed to fundamental and applied concepts of sediment transport. They will learn how to measure bed surface and subsurface sediment on different morphologies in the field and in the rock record, estimate bedload and suspended transport for different channel patterns and flow hydraulics. Students will be actively involved in discussions in the field and in the classroom.

### Course Contents

1. Module / Topic 1 – Sediment, fluid and flow properties
2. Module / Topic 2 – Field measurements
3. Module / Topic 3 – Transport of coarse (bedload) and fine sediments (suspension)
4. Module / Topic 4 – Sedimentary processes in the rock record

### Learning Outcomes

By the end of the course, doctoral students will be able to identify preferential transport mechanics and estimate the sediment fluxes:

### Teaching Format

Field work, lectures and presentations in classroom settings

### Assessment Method

Not determined