Overview of the sedimentary environments and processes recorded in archives of clastic, carbonate and chemical sedimentary rocks along the source-to-sink sedimentary system. The students get state-of-the-art knowledge of fundamental concepts and papers related to the different segments of the source-to-sink system, from proximal alluvial systems down to deep sea fan deposition and carbonate environments. The students also use this course to develop a detailed understanding of the sedimentary rocks of their own master research area.

One part of the course goes over clastic sedimentary rocks in the following order: 1) Sediment routing systems - source-to-sink processes and distal fluvial systems (S. Castelltort), 2) Sedimentary structures (K. Föllmi), 3) Glaciogenic and proximal fluvial depositional systems and processes (A. Moscariello), 4) Paleosoils (E. Verrecchia), 5) Lake systems and processes (D. Ariztegui), 6) Deltaic systems and clastic shelf - shallow marine processes (S. Castelltort), 7) Deep sea clastic systems and processes (S. Castelltort), 8-9) Biogenic, authigenic and clay sediments (T. Adatte - K. Föllmi), 10) Pelagic environments (to be defined).

The courses 1, 3, 5, 6, 7 take place in Geneva, and courses 2, 4, 8, 9 and 10 in Lausanne.

For examination, in addition to a written exam with questions from each individual parts of the whole course, the students are asked to present a poster on the sedimentology-related research problems of their MSc research study area.

A week of courses and field work is dedicated to carbonate rocks (P. Kindler) and will take place before the beginning of the second year of Master.