Department: Mining Engineering   **Division:** Mining Exploration

Level and Major: Ph.D., Mining Exploration

Course Title: Special Topics II (Seismic Tomography)

Number of Credits: 3   **Lecturer:** Dr. Hamidreza Ramazi

Course Goals and Objectives

Seismic tomography and its application in mining Engineering.

Course Topics

- Syllables of the course
- Seismic wave propagation, recording and waves paths algorithms
- Numerical methods and their application in seismic tomography
- Forward modeling in seismic tomography
- Transient time Seismic tomography
- Backward modeling in seismic tomography waves form tomography
- AVO
- Seismic tomography and velocity gradient
- Seismic tomography surveying
- Case studies
- Presentation by students and discussion.

Reading Resources

- Up-to-date articles