

Syllabus PTEK218/Rock physics

- Textbook: Gueguen, Y. and Palciauskas, V., 1994. Introduction to the physics of rocks. Princeton University Press.
 - Chapter 3. Heterogeneous media: 53-61.
 - Chapter 4. Mechanical behaviour of dry rocks: 73-91.
 - Chapter 5. Circulation of fluids: Permeability: 117-133.
 - Chapter 6. Mechanical behaviour of fluid-saturated rocks: 135-144.
 - Chapter 7. Acoustic properties: 159-180.
 - Chapter 8. Electrical conductivity: 182-201.
 - Chapter 9. Dielectric properties: 212-233.
 - Chapter. 10. Thermal conductivity: 254-256, 267-269.

- Additional lecture notes related to the matlab exercises:
 - Anisotropic effective elastic medium theory.
 - Effects of pore fluid pressure communication.
 - Matlab programming techniques.