

Principles of Unconventional Gas Extraction
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CUP, Beijing, China
July 17& 18 and August 1 & 2

http://www.ems.psu.edu/~elsworth/courses/comp_res_geomechs/2019b/outline.pdf

Day 1 (Wednesday July 17th)

1. Background, Introduction, Effective stress principle, Darcy's law [morning]
2. Gas flow equations, equation of state, gas properties, rock properties [afternoon]

Day 2 (Thursday July 18th)

1. Single porosity and dual porosity models, coupled multi-physics models [morning]
2. Applications to coal seam gas reservoir engineering [afternoon]

Day 3 (Thursday August 1st)

1. Geomechanics of gas shales [2:30-3:30]
https://www.ems.psu.edu/~elsworth/courses/comp_res_geomechs/2018/2elsworth.pdf
2. Gas fracturing in unconventional reservoirs [4:00-5:00]
https://www.ems.psu.edu/~elsworth/courses/comp_res_geomechs/2018/3elsworth.pdf

Day 4 (Friday August 2nd)

1. Propagation, proppant transport and conductivity of hydraulic fractures [2:30-3:30]
https://www.ems.psu.edu/~elsworth/courses/comp_res_geomechs/2018/4elsworth.pdf
2. Seismicity-permeability response for reservoirs [4:00-5:00]
https://www.ems.psu.edu/~elsworth/courses/comp_res_geomechs/2019/4elsworth.pdf