Week 1:  Introduction to Carbonate Sediments - Sarg

Week 2:  Carbonate Facies & Platform Architecture – Sarg

Week 3:  Seismic Expression of Carbonate Platforms - Sarg

Week 4:  Diagenesis I – Humphrey
  1. carbonate chemistry, solutions, and equilibria
  2. diagenetic processes & porosity evolution

Week 5:  Diagenesis II – Humphrey
  1. diagenetic environments, processes, and products
  2. dolomitization

Week 6:  Formation Evaluation – Batzle & Prasad

Week 7:  Formation Evaluation

Week 8:  Formation Evaluation

Week 9:  Formation Evaluation

Week 10: Production Engineering: Introduction - Kazemi
  1. Flow in fractures as compared to flow in porous matrix
  2. Flow in dual-porosity and multi-continuum porous media
  3. What makes single-phase flow different from multiphase flow

Week 11: Production Engineering: Multi-scale physics - Kazemi
  1. Multi-scale physics of flow and computation in naturally fractured porous rocks
  2. The role of geomechanics on fracture flow: poroelasticity and thermoelasticity
Week 12: Production Engineering: Reservoir performance – Kazemi
1. *Dry gas* vs. *gas-condensate* reservoir performance
2. *Primary, secondary and tertiary oil recovery* performance

Week 13: Class Project

Week 14: Class Project

Week 15: Class Project

Week 16: Class Project