Syllabus

- Introduction to reservoir engineering
- Rock Characteristics, Significance in Petroleum Reservoirs
- Fundamentals of Reservoir Fluid Properties, Phase Behavior
- Fundamentals of Fluid Flow in Petroleum Reservoirs
- Transient Well Pressure Analysis
- Fundamentals of Data Acquisition, Analysis, Management.
- Integration of Geosciences and Engineering Models.
- Evaluation of Primary Reservoir Performance
- Volumetric Methods in Petroleum Reservoir Analysis
- Empirical Methods for Reservoir Performance Analysis
- Decline Curve Analysis
- Material balance methods
- Reservoir simulation fundamentals
- Reservoir simulation model applications
- Fundamentals of oil and gas reserves
- Fundamentals of petroleum economics, integrated modeling, and risk and uncertainty analysis
- Improved recovery processes: fundamentals of water flooding & enhanced oil recovery.
- Operational issues in reservoir development and management

Reference text books:


Class assignments:  
7 weekly reading assignment.  
3-4 home work exercises.

Grade breakdown:  
50% home work.  
50% final exam.