Class Topics: First 8 Weeks (subject to change or substitution)

Week 1
Class 1, Tuesday, January 18:
Lecture: Introduction, drilling, rock sampling from wells
Lab exercise: Plotting drilling time and cutting description

Class 2, Thursday, January 20:
Lecture: Sandstone and shale depositional environments, petrology, logs
Lab exercise: Core description

Week 2
Class 3, Tuesday, January 25:
Lecture: Carbonate and evaporate depositional environments, petrology, logs
Lab exercise: TBA

Class 4, Thursday January 27:
Lecture: Provenance, transport indicators, dipmeter logs, paleontology
Lab exercise: TBA

Week 3
Class 5, Tuesday, February 1:
Lecture: Porosity and permeability
Lab exercise: Well cutting petrology exercise

Class 6, Thursday, February 3:
Lecture: Reservoir fluids, mudlogs
Exercise: Well cutting petrology exercise

Week 4
Class 7, Tuesday, February 8:
Lecture: Drill stem testing
Lab exercise: Drill stem test interpretation

Class 8, Thursday, February 10:
Lecture: Integrated petrophysics Part 1: matrix
Exercise: Well log lithologic interpretation

Week 5
Class 9, Tuesday, February 15:
Oil Information Library Exercise

Class 10, Thursday, February 17:
Oil Information Library Exercise

Week 6
Class 11, Tuesday, February 22:
Lecture: Integrated petrophysics Part II; pores and fluids
Exercise: Well log porosity determination
Class 12, Thursday, February 24:
Lecture: Cross-section construction and correlation
Exercise: Cross-sections

Week 7

Class 13, Tuesday, March 1:
Lecture: Map construction, structural interpretation and evaluation
Exercise: Map construction

Class 14, Thursday, March 3:
Lecture: Quantitative petrophysics; determination of “pay”
Exercise: Calculator exercise

Week 8

Class 15, Tuesday, March 8:
Lecture: Scientific method in petroleum geology
Exercise: Exam review, Q&A, no late work accepted past 8:20

Class 16, Thursday, March 10:
Mid-term exam-includes material from lecture and lab exercises.

Tuesday, March 15 and Thursday March 17: Campus closed for Spring Break
Class Topics: Last 8 Weeks (subject to change or substitution)

Week 9

Class 17, Tuesday, March 22:
Lecture: Petroleum systems
Exercise: Field study #1

Class 18, Thursday, March 24:
Lecture: Petroleum source rocks
Exercise: Continue field study #1

Week 10

Class 19, Tuesday, March 29:
Lecture: Basin analysis, sequence stratigraphy
Exercise: TBA

Class 20, Thursday, March 31:
Lecture: Seismic methods
Exercise: TBA

Week 11

Class 21, Tuesday, April 5:
Lecture: Reservoir and development geology
Exercise: Begin field study #2

Class 22, Thursday, April 7:
Lecture: Exploration methodology; Discuss independent research project topics
Exercise: Continue field study #2

Week 12

Class 23, Tuesday, April 12:
Lecture: no lecture
Exercise: TBA.

Class 24, Thursday, April 14:
Lecture: Modern conventional oil play analog
Exercise: Q&A; Begin independent research

Week 13

Class 25, Tuesday, April 19:
Lecture: Modern unconventional gas play analog
Exercise: Q&A; Continue independent research

Thursday, April 21: Easter Break

Week 14

Class 26, Tuesday, April 26:
Texas Alliance Expo this week, Lecture TBA
Exercise: TBA

Class 27, Thursday, April 28:
Week 15

Class 28, Tuesday, May 3:
Lecture: No lecture
Exercise: Research Project Presentations

Class 29, Thursday, May 5:
Lecture: careers, business of petroleum geology, ethics
Exercise: Exam Review, Q&A

Week 16

Tuesday, May 10, Final Exam: 8 to 10:00 PM