Practical Salt
Tectonics Summer 2
GEOL 6105 CRN 36589
GEOL 5162 CRN 36590
GEOL 4166 CRN 36591

July 22-24 and 27-29, 2020:  9AM-12 PM  via Zoom  link will be sent upon registration

Instructor: Dr. Katherine Giles    kagiles@utep.edu

Grading:
40% Attendance. To be excused for any reason, please send an email request to Dr. Giles.
60% 6 Exercises. Completed exercises are to be emailed to Dr. Giles following discussion in class.

A short course emphasizing the geometry and evolution of salt structures and their impact on petroleum systems in salt basins around the world

Introduction
Salt basins
- deposition of layered evaporite sequences
- tectonic settings of evaporite basins

Exercise 1 – Salt and presalt
Mechanics
Diapir initiation
- contraction and strike-slip
- turtle structures
- progradational loading
- extension

Exercise 2 – Evacuation geometries
Diapir reactivation
- extension
- contraction
- strike-slip

Exercise 3 – Diapir styles
Passive diapirs
- diapir margins
- halokinetic sequences and drape folding
- megaflaps
- diapir flanking faults
Exercise 4 – Halokinetic sequences
Allochthonous salt
- emplacement
- styles (cont.)
- inclined feeders and salt-tongue canopies
- deep evacuation recorded by shallow salt
- salt nappes
- distribution
- diapir

Exercise 5 – GoM allochthonous salt
Salt in thick-skinned extension

Exercise 6 – Central North Sea

Salt in convergent-margin foldbelts
- emplacement (cont.)
- styles
- vertical feeders and salt-stock canopies
- thin-skinned shortening

Salt in convergent-margin foldbelts (cont.)
- thin-skinned shortening (cont.)
- thick-skinned inversion