

**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