

Structural Geology
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In this two-hour refresher course, Hassan will discuss some basic parts of structural geology. He starts by defining the attitude of linear and planar structures and fundamentals of geological maps of deformed areas. Map techniques such as three-point problem and structural contours are introduced and used to complete unfinished geological maps and find the attitude of geological planes at the surface and subsurface. He will discuss stress, strain, and deformation and introduce Mohr circle for stress and its application in fault analysis. The role of pore fluid pressure in faulting and hydraulic fracturing is also discussed. Stereographic analysis is used to plot geologic structures such as folds, determine the orientation of stress relative to fold and faults, and to rotate and undeform geologic structures. Foliation and lineation are discussed in terms of their kinematic significance in terms of strain, applying stereonet.