



## Rock Mechanics

### MODULE

#### About the Skill Module

This skill module reviews essentials of rock mechanics required for the general practice of petroleum geomechanics and covers basic concepts such as stress, deformation, and failure in rocks.

[See example online learning module](#)

#### Target Audience

Geoscientists, petrophysicists, completion and drilling engineers, or anyone involved in unconventional reservoir development.

#### You Will Learn

Participants will learn to:

- Identify three main constituents of geomechanical problems: initial state, disturbing events and mechanical response in different geomechanical problems
- Define stress tensor, effective stresses, principal stresses, and in-situ stress regimes and visual stresses in the Mohr coordinate system
- Recognize the significance of deformation in rock mechanics and define strain tensor and different types of strains
- Describe elastic and elastoplastic constitutive models between stress and strain tensors such elastic and elastoplastic and their parameters
- Calculate dynamic elastic parameters and Identify the differences between dynamic and static elastic parameters
- Recognize the importance of shear failure criteria in geomechanics and describe different linear and non-linear failure criteria and their advantages and limitations
- Read and use laboratory reports for measurement of elastic parameters and strength properties of rocks

#### Product Details

Categories: [Upstream](#)

Disciplines: [Petrophysics](#) [Unconventional Resources](#)

Levels: [Basic](#)

Product Type: Individual Skill Module

Format: On-Demand

Duration: 4 hours (approx.)

**\$395.00**