



## Advanced Hydraulic Fracturing - AHF

### COURSE

#### About the Course

This advanced course is designed for those who have a practical understanding of the applications of hydraulic fracturing and want to expand their knowledge. The course provides the details and discussion of fracturing concepts usually accepted or assumed in fracturing applications both for conventional and unconventional reservoirs. The strengths and limitations of various approaches to fracturing treatment design are also covered. Attendees should leave the advanced course with a better understanding of the hydraulic fracturing process. They will have evaluated a vertical well as teams to determine the appropriate stimulation, its execution and how best to evaluate the results. In addition, they will also evaluate an unconventional horizontal well to determine the type completion to be employed as well as the stimulation technique.

*"The instructor has a great enthusiasm for teaching. He has a lot of knowledge, and is very willing to pass it on."* - Production Engineer

*"I think time was devoted well to all subjects. Practical applications, examples, knowledge of instructor. This class was great, I can't think of any improvements."* - Operations Engineer

#### Target Audience

Production, operations, and completions engineers who are actively involved in hydraulic fracturing applications and desire a more in-depth understanding of hydraulic fracturing theory and applied concepts. It is designed for engineers that have some fracturing experience or those who have already attended the PetroSkills Intermediate level Hydraulic Fracturing Applications course.

#### You Will Learn

Participants will learn how to:

- Better understand rock properties and rock mechanics related to fracturing applications
- Better understand fracturing fluid mechanics and proppant transport
- More effectively design fracturing treatments through better understanding of factors influencing hydraulic fracturing applications
- Use pre-frac injection test data and real-time fracturing treatment data in fracturing applications to define fracture parameters and improve frac treatment design
- Consider factors influencing post-frac fracture conductivity and well cleanup
- Realize the strengths and limitations of existing hydraulic fracturing technology and fracture models

- Expand fracturing applications to fit a wider range of reservoir types and conditions

## Course Content

- Rock properties and fracture mechanics related to the fracturing process
- Fracturing fluid mechanics
- Proppant transport
- Pre-frac injection test analysis
- Fracture closure
- Fracture monitoring and fracture measurement
- Fluid leak-off
- Re-fracturing considerations
- Review of existing fracture modeling software
- Evaluation of post-frac well performance

## Product Details

Categories: [Upstream](#)

Disciplines: [Production and Completions Engineering](#) [Unconventional Resources](#)

Levels: [Specialized](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [PetroSkills Specialist](#) [Steve Metcalf](#)