



# Oil & Gas Academy

## Learn how to maximize the value of your microbial control program

Bacteria will grow just about anywhere water can be found. Due to the large volume of water used during exploration and production of hydrocarbons, oil and gas operations provide ideal environments for rapid microbial proliferation and contamination. Without the appropriate selection and application of biocides, oilfield microbes such as sulfate reducing (SRB) and acid producing bacteria (APB) will impact the quality and quantity of production, asset integrity, and the overall safety of operations.

An optimized microbial control program will deliver value to oil and gas operations. But how do you know if you are maximizing the value of your microbial control program to prevent biofouling, microbially influenced corrosion (MIC) and souring of hydrocarbons?

The DuPont Oil and Gas Academy is an educational and interactive experience during which attendees learn how to make effective biocide selections based on an understanding of oilfield microbiology and chemistry. Each academy is customized to address the audience's specific needs.

## Leaders in Microbial Control for Oil and Gas Operations

DuPont Microbial Control has over 60 years of experience in developing effective biocides and bringing microbial control solutions to the oil and gas industry through a network of highly trained service companies. Our leadership position is based on:

- The broadest portfolio of biocides for advanced sustainable microbial control, including innovative formulations
- Technical expertise and advanced testing capabilities
- Regulatory expertise
- Industry expertise
- World-class manufacturing capabilities

## Module 1: Oilfield Microbiology

This module covers the basics of oilfield microbiology useful for field engineers, scientists and chemists with little to no microbiology experience. We will discuss what factors of oil and gas production sites, such as chemistry and physical parameters, allow for the proliferation of microorganisms. We will talk about the problems created by microbes in upstream oil and gas production and simple techniques that can be used to evaluate their presence, numbers and activity.

*Approximate time: 60-75 minutes*

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## Module 2: Oilfield Biocides

This module familiarizes the participants with various types of antimicrobial chemistries used in oil and gas exploration and production. An overview of the mode of action, speed of kill, efficacy and compatibility with materials used in oil and gas systems will allow the participants to understand and appreciate the complex processes involved in selecting a biocide for their application. Further, local regulations and their impact on the user's ability to select certain biocides will be introduced to the audience.

*Approximate time: 60-75 minutes*

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## Module 3: Biocide Selection

Biocide selection varies depending on the application. This module leads to an understanding of what factors need to be considered based on applications, including drilling fluid preservation, hydraulic fracturing, water flooding and hydrotesting. During this module, the audience is encouraged to share current microbiology concerns for an engaged discussion.

*Approximate time: 60-75 minutes*



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