

# Human Factors Engineering and Offshore Drilling: Designing for Safety

## 2 – Day Course

**Program Content:**

This course is intended to provide an overview of Human Factors Engineering (HFE) for those working in industrial settings. The contents of the course specifically contains information about: the methods and measures used to document when HFE has been effectively implemented; examples of safety and efficiency benefits of HFE; and the differences between HFE, Safety Culture, and Human Error. Much of the course is participatory and discussion based. The first day of the course will involve presentations and activities that illustrate the fundamentals of HFE. As part of the second day, attendees will workshop a solution to a current HFE design problems with a group.

**Course Outline:****Day 1**

- History of HFE
- Relationship between HFE and Safety Culture
- Challenges with "Human Error" paradigm

## Basics of HFE (Capabilities and Constraints of Humans)

- Information processing
- Ergonomics
- Affordances
- Decision Making

## Impacts of Bad HFE (on both safety and efficiency)

- Process Industry
- Oil & Gas Operations
- Space Exploration

**Day 2**

## Methods for HFE

- Fundamentals
- Needs analysis
- Validation of design

## Methods for preventing, identifying, and mitigating Bad HFE

- Task analysis
- Heuristic analysis
- Usability testing

**Who Should Attend?**

Anyone involved in the management, design, or operations of industrial systems that humans operate.