



## Fundamentals of Casing Design - FCD

### COURSE

#### About the Course

Casing design is an integral part of a drilling engineer's work scope. This course provides a comprehensive overview of the design process, emphasizing the working stress approach currently used in the industry. On completion of this course, successful participants will be able to select casing points, identify tubular requirements and loads, and design and specify the required casing string. Through a combination of lecture and extensive hands-on examples, the fundamentals of casing design are imparted to the attendees. Estimation of standard and special loads is covered in detail. Standard theories of strength and failure are discussed as well as advanced considerations for combined loads. In addition safe handling, running and hanging practices are covered. Participants will be furnished Dr. Byrom's textbook, 'Casing and Liners for Drilling and Completion,' and computer spreadsheets to facilitate routine design calculations.

*"I appreciated very much the teacher's experience, professionalism, and knowledge in the subject matter."* - RTOC Specialist, Canada

*"Biaxial and triaxial load concepts were described and exercised just brilliantly."* - Drilling Engineer, Azerbaijan

*"Class examples were excellent. Brought concepts together well."* - Drilling Engineer, United States

#### Target Audience

Drilling engineers, service personnel involved in developing well plans, and managers interested in learning about the well design process.

#### You Will Learn

Participants will learn how to:

- Select casing setting depths based on pore and fracture pressure data as well as other criteria
- Determine casing and bit sizes, and alternatives for contingencies and special clearance situations
- Identify and define load cases to meet specific design requirements
- Apply standardized design factors to meet specific design requirements and identify the controlling design load for each string in the well
- Use and understand casing and connection specifications and select casing to satisfy the controlling design requirements

- Understand the limits of single load specifications and adjust the basic design for combined loading effects
- Design casing for high pressure fracturing in horizontal wells
- Apply practical safe handling, running, and hanging

## Course Content

- Goals of casing design
- Types of oilfield tubulars and connections
- Casing point selection and size determination
- Load estimation methods for casing and liners
- Typical design factors
- Theories of strength and failure (standard collapse, burst, axial; yield basis for combined loads)
- Design examples and exercises for all key loads and strings
- Casing handling, running, and hanging practices

## Product Details

Categories: [Upstream](#)

Disciplines: [Well Construction/Drilling](#)

Levels: [Foundation](#)

Product Type: [Course](#)

Formats Available: [In-Classroom](#)

Instructors: [PetroSkills Specialist](#) [James Bobo](#)

## In-Classroom Format

|            |            |   |        |                           |            |
|------------|------------|---|--------|---------------------------|------------|
| 22 Jul '24 | 26 Jul '24 | - | Course | In-Classroom (in Houston) | \$4,710.00 |
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