Course: Offshore drilling from fixed and floating drilling structures; directional drilling including horizontal drilling; theory of deviation monitoring and control.

Prerequisites: PETE 405 or 661; or approval of instructor.

Texts: 
- Selected Technical Papers.

Basis for Grading:
- Homework 20%
- Quiz A 20%
- Quiz B 20%
- Project 20%
- FINAL 20%

Topics:
- Drilling a well from a floating vessel; station keeping 3
- Wellheads; casing program; blowout preventers 3
- The drilling riser; riser tensioning; drilling hydraulics 3
- Motion compensation; formation testing; shallow water flows 4
- Dual gradient drilling; subsea mudlift drilling 6
- Directional drilling; wellbore surveying techniques; 4
- Wellbore trajectory control 4
- The kick-off, drilling with mud motors and turbines 6
- The bottomhole assembly 4
- Horizontal drilling; torque and drag 3
- Hydrates and potential problems in deepwater drilling 2

Quizzes: (3 hours)
Total: 45 hours

Computer usage: Required for homework