

# Course Outcome Guide (COG)

Approved 01 MAY 2012

<b>Course: PTLO 130</b>	<b>Oil Field Hydraulics</b>	<b>Credits:</b>	3	<b>Instructor:</b>	
<b>Course Description:</b>	This course will cover hydraulics applicable to drilling, completion, and production. Emphasis on hydraulic control of equipment to include directional control valves, motors, cylinders and system control when using various hydraulic components. Students will understand the application of hydraulic systems associated with work-over systems and equipment.				
Concepts and Issues	Process Skills	Assessment Tasks	Intended Outcomes		
			Course	General Education or Program	Institutional
<ul style="list-style-type: none"> <li>• Pascals Law</li> <li>• Mechanical aptitude</li> <li>• Construction of piping from prints</li> <li>• Problem solving</li> <li>• Hydraulic principles</li> <li>• Safety</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate an understanding of product flow through tanks and piping</li> <li>• Examine the process of controlling hydraulic fluids through various valves</li> <li>• Distinguish the different types of control circuits in hydraulics</li> <li>• Examine Pascals Law and how it applies to the workover process</li> <li>• Practice safe operations around high pressure fluids</li> </ul>	<ol style="list-style-type: none"> <li>1. Practical exams requiring the student to identify different components, construct circuits and verify measurements</li> <li>2. Multiple choice exams</li> <li>3. Group participation with various equipment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Identify and describe equipment commonly found on a workover control panel</li> <li>2. Calculate pressures in a hydraulic circuit</li> <li>3. Construct control circuits to control hydraulic motors and cylinders</li> <li>4. Demonstrate the operation of various valves used to control hydraulic circuits</li> </ol>	Basic knowledge and skills required as a production technician in the petroleum industry	