**Outcome:**

Students Learn How to implement Lock Out Tag Out Procedures to isolate pieces of process equipment in a sequential, and safe manner.

**Lecture:**

Lecture to review: Lock out tag out procedures

**Demo:**

1. Hands on Process skid (Hot Unit) Isolating valves, pumps, and motors for service using industry standard lock out tag out procedures with appropriate testing to verify safe isolation.

**Lab:**

1. Location: HOT Unit (GRHS)
2. Students Will Demonstrate Understanding Lock out Tag out by researching the process documentation and P&ID Prints for proper isolation, lock out and tagging.
3. Students to demonstrate post isolation verification testing for safe Isolation from energy sources.
4. Students will demonstrate the ability to fill out and file the appropriate paperwork for lock out tagout processes.
5. Students to demonstrate reversing a lock out tag out scenario and re-energizing the process to normal runnable state.

**Documentation:**

1. Hot Unit Procedures

NP-TK1 NP-SAM3 NP-#1

NP-TK2 NP-UP1

NP-TK3 NP-CI1

NP-SAM1 NP-CI2

**Competency Mastery:**

1. Students will demonstrate mastery of lock out tag out by isolating the control valve for FIC 101 on the process skid. All LOTO procedures will accompany the standardized paperwork, and the students will return the equipment back to a operational state.
2. Students will demonstrate mastery of lock out tag out by isolating Pump/Motor 101A, Pump/Motor 101B, and Variable frequency drive Pump/Motor 102 on the process skid. All LOTO procedures will accompany the standardized paperwork, and the students will return the equipment back to a operational - running state.
3. Students will also master Competency through demonstration of hands on skills during Hot Unit Module exercises.