SECTION HEADING

MECH 2130: Advanced Fluid Power Systems II

Description

Advanced Fluid Power Systems II provides students advanced fluid power theory and application for product specification and selection, design, service and fabrication.

Credits

4

Prerequisite

MECH 2105

Corequisite

None

Topics to be Covered

1. Light, medium and heavy-duty hydrostatics

2. Noise levels and dew points

3. Hydraulic joystick controllers

4. Load sensing and Filtration circuits

5. Horse power limiter and pressure pumps

6. Design and testing of hydraulic motors

7. Mobile valve systems

8. Pilot controlled dcv

9. Component research and availability

10. Programming cylinder positioning

11. Accumulators

12. Design circuit per specifications

Learning Outcomes

1. Identify and control potential safety hazards and implement safe working practices.

2. Identify hydrostatic components.

3. Research product specifications and availability.

4. Understand various fluid power controls and sensing.

5. Rebuild and repair fluid power components.

6. Demonstrate various pump controls.

7. Determine system filtration requirements.

8. Design various hydraulic and pneumatic circuits.

Credit Details

Lecture: 2

Lab: 2

OJT: 0

MnTC Goal Area(s): None