

# MFG 304 - MARINE HYDRAULICS

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## Course Description

Marine Hydraulics focuses on the systems, applications, hydraulics, and safety requirements specific to the marine and offshore Remote Operated Vehicle (ROV) environments. The design, repair and maintenance of launch and recovery equipment, hoses, sensors and components associated with ROV hydraulics systems will be emphasized. Students will use test equipment and protocols to develop trouble shooting methods to analyze and integrate this technology. Group 2 course.

## Credit Hours

3

## Contact Hours

4

## Lecture Hours

2

## Lab Hours

2

## Required Prerequisites

MFG 104, MTH 111 or higher, PHY 121

## General Education Outcomes supported by this course

Critical Thinking - Direct

## Course Learning Outcomes

### Knowledge:

- Understand and apply fluid power principles, components and interactions within complex applications.

### Application:

- Design fluid power circuits and systems, specific to the marine industry.
- Identify fluid power systems in industrial and commercial applications, specific to the marine industry.

### Integration:

- Apply fluid power equations, laws, and theorems to solve mathematical problems.

### Human Dimension:

- Collaborate with others to resolve complex equipment or system issues.

### Caring - Civic Learning:

- Communicate the historical significance of fluid power technology.

### Learning How to Learn:

- Relate fluid power skills to real-world applications.