

WSI 240 - ROV SYSTEMS AND OPERATIONS

Course Description

This course introduces the technology of remotely operated vehicles (ROV) as a system used for subsea activities including scientific study and research, subsea exploration and industrial applications. International Marine Contractors Association (IMCA) and Association for Diving Contractors International (ADCI) guidelines will be used for training. Students will gain firsthand experience operating the ROV for the purpose of collecting information from docks, piers, and research vessels. Group 2 course.

Credit Hours

3

Contact Hours

4

Lecture Hours

2

Lab Hours

2

Required Prerequisites

EET 103 and MTH 111 or higher.

Recommended Prerequisites or Skills Competencies

ENG 111; Recommended competencies: Students should have basic computer skills and be comfortable working around water from either a boat or dock/pier.

General Education Outcomes supported by this course

Communications - Direct

Course Learning Outcomes

Knowledge:

- Mobilize remotely operated vehicles for operation in the marine environment.
- Troubleshoot to repair remotely operated vehicle components.
- Prepare logs and operational reports of daily activities.

Application:

- Practice remotely operated vehicle troubleshooting skills for completion of a marine project.
- Correctly operate remotely operated vehicles.

Integration:

- Describe the impacts of marine environmental factors on ROV operations.
- Directly implement proper safety protocol in all operations.
- Prioritize the integration of subcomponents for completion of a marine project.

Human Dimension:

- Collaborate as members of a cross-functional team.
- Relate career opportunities to remotely operated vehicles.

Caring - Civic Learning:

- Assess potential marine ecosystem impact areas using remotely operated vehicles.
- Directly observe impacts of invasive species on the Great Lakes ecosystem.

Learning How to Learn:

- Evaluate proper use of equipment for completion of a marine project.
- Adapt to operational change during a marine based project.