

Project Title: [Kayak Mobility Kit](#)

Team Members: Ryan Ashley
Connor Ort
Lukaas Roller
Kyle Smith

Faculty Advisor: Donald Mueller, Ph.D., P.E.

Area: [Mechanical Engineering](#)

Sponsor: [Lorne Young](#)

Adaptive athletic equipment has opened numerous activities to people with physical challenges and has led to advances that provide for the betterment of society as a whole. The goal of this project is to provide a kayak equipped with an alternative means of propulsion and steering to allow a physically challenged person, lacking use of one arm, to manually operate the kayak. The kit will be designed to maintain standard kayak capabilities such as speed and maneuverability. Specific requirements include the ability to average at least 2 mph and perform a complete turn within a distance of 1.5 times the kayak length. Moreover, the designed solution must allow for the kayak to be transported relatively easily and travel in shallow water. Kayaking can be an enjoyable and challenging outdoor activity, so it is desired to maintain the basic function and characteristics of the kayak with the addition of propulsion and steering assistance, as needed.