Labtech International (LI) is a manufacturer and supplier of quality laboratory equipment. LI manufactures a variety of end-over-end rotary tumblers, which aid laboratories in the analysis of liquid extraction that meet EPA guidelines. The lab equipment produced by LI is generally applicable in various laboratory settings, including medical applications in separation of blood fractions [i.e. platelets, plasma] and in basic research.

Labtech was using off-the-shelf controllers for their motors and timers—tools that don’t offer the flexibility to design products to their requirements. To add to that, the units were bulky and cumbersome which are difficult to install and configure. They require support to design and build a control board or a set of control boards that will allow control of the motor speed and have a timer that can be interlocked with each other and be set by the operator.

Labtech International came to George Brown College to design and build a prototype that meets their technical requirements.

Under principal investigator Jamie McIntyre, the student researchers worked on the design of the Control Board and corresponding touch-screen Graphical User Interface.

The research team then moved on to the final working prototype of the Control Board and corresponding touch-screen Graphical User Interface based on designs created in the testing of the early phase prototype. The working prototype was tested and refined, and a design package completed and given to the partner.

Labtech International is optimistic that the Control Board prototype built in collaboration with George Brown College will allow them to complete the final element required for their End-Over-End Rotary Tumblers. Once complete and fully tested, Labtech hopes to begin production and sale of their Rotary Tumblers to Health Care and Research organizations all over the world, cementing their reputation as an innovative leader in the industry.

During this phase, the coding requirements and Control Board prototype design were finalized, along with an early phase working prototype that was tested to validate the approved list of requirements.