

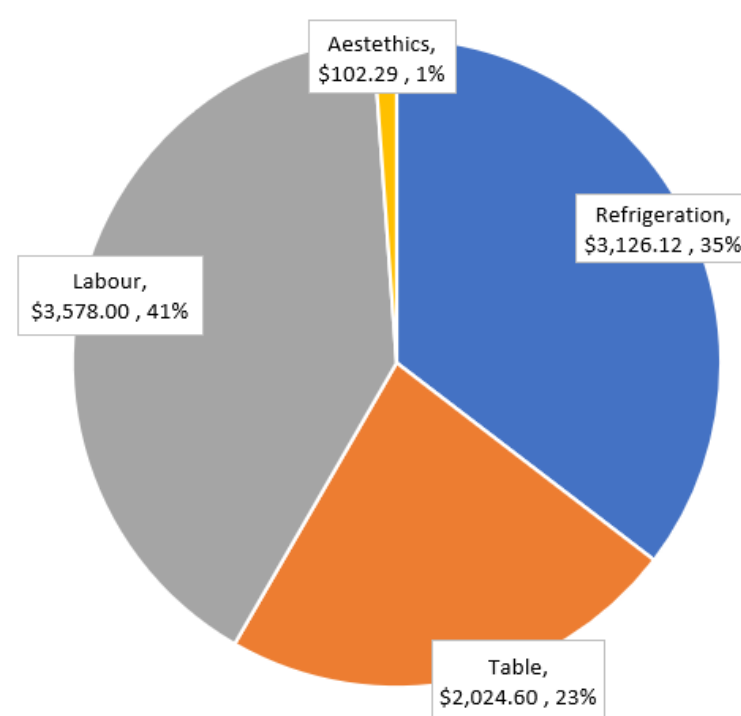
Background

In 2018, the U of R and the ASHRAE Regina Chapter collaborated to establish an undergraduate HVAC&R course. Various capstone projects over the past 3 years have been centered on providing new demonstrative equipment aimed to enhance the learning potential of the lab and encourage participation and enrollment in the course.

Project Objective

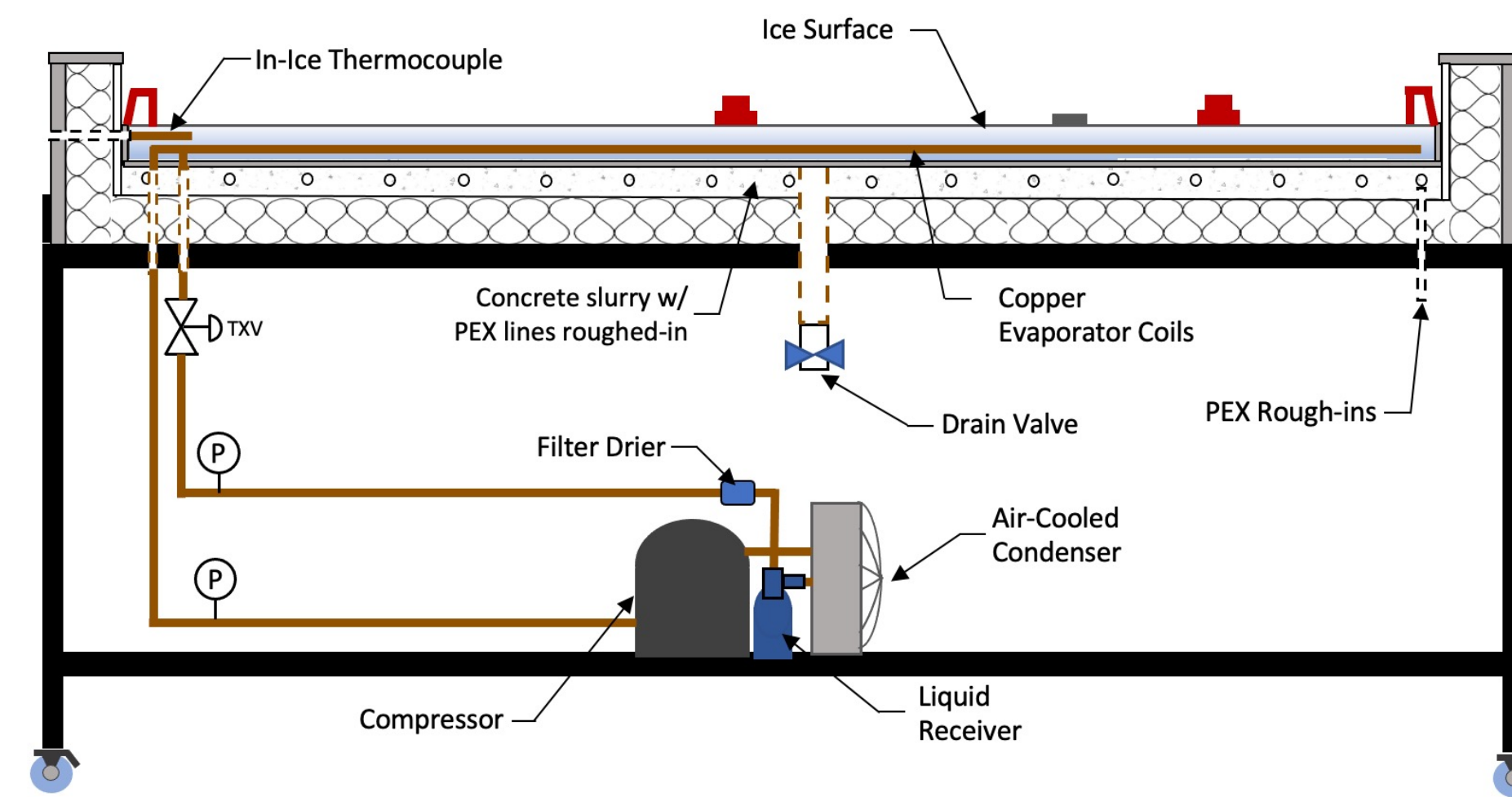
Design and construct an interactive learning apparatus for the ENIN 463 laboratory to demonstrate the fundamental principles of vapor compression refrigeration and thermal energy storage systems.

Cost Breakdown



The laboratory apparatus was constructed for a third of the price of industry equivalent laboratory equipment. As an added bonus, the equipment is customized for future flexibility and entertainment

The Design

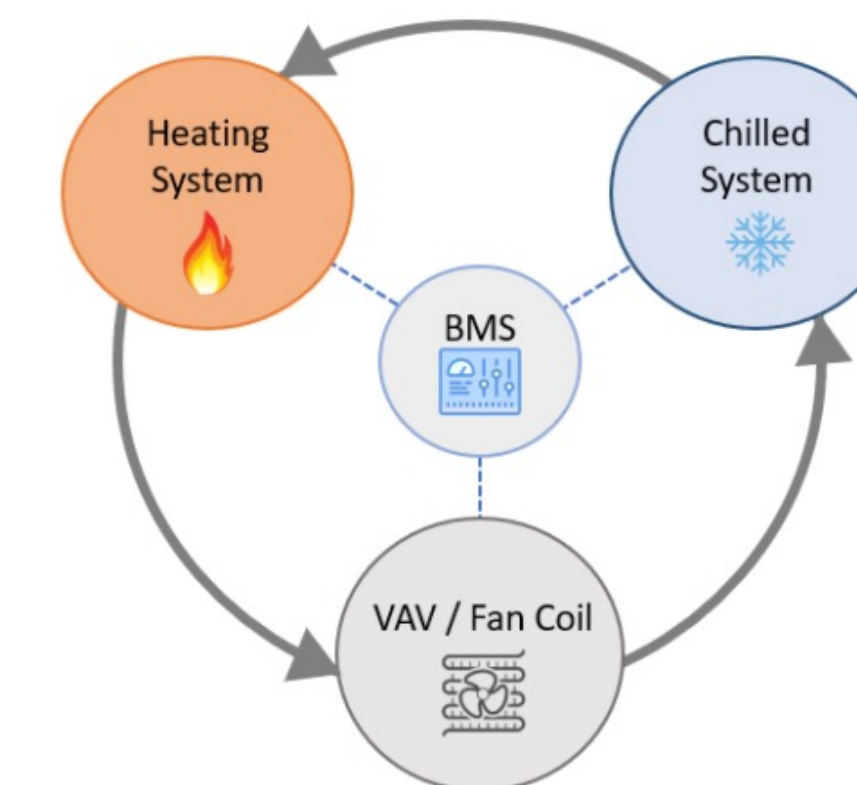


Ice Hockey Playing Surface

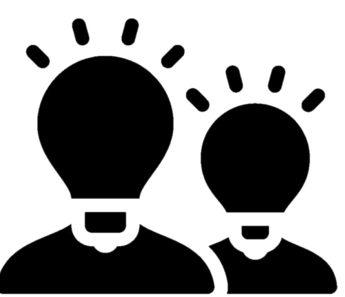

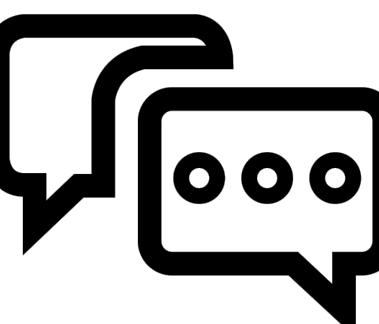




Future Work

4-Phase Project Integration to simulate a realistic automated HVAC Building Management System.



Project Timeline

- Research & Brainstorming 
- System Design 
- Consultation & Equipment Selection 
- Equipment Fabrication 
- Verification & Testing 
- Laboratory Implementation 