

Course discipline/number/title: FST 2518: Commercial Refrigeration Lab

- A. CATALOG DESCRIPTION
1. Credits: 2
 2. Hours/Week: 4
 3. Prerequisites (Course discipline/number): FST 1651
 4. Other requirements: None
 5. MnTC Goals (if any): NA
- B. COURSE DESCRIPTION: This course covers lab experience in commercial refrigeration. Students will operate and troubleshoot refrigeration equipment including compressors, flow controls, and heat exchangers.
- C. DATE LAST REVISED (Month, year): February, 2022
- D. OUTLINE OF MAJOR CONTENT AREAS:
1. Applications of Refrigeration systems
 2. Troubleshooting complex systems
 3. Operating conditions measurements and evaluations
- E. LEARNING OUTCOMES (GENERAL): The student will be able to:
1. Apply safety when operating refrigeration equipment.
 2. Analyze a hot gas defrost/ice harvest system.
 3. Operate a commercial refrigeration electric defrost system.
 4. Operate/troubleshoot a walk-in cooler/freezer
 5. Check the operation of a water cooler.
 6. Check the operation of a commercial icemaker.
 7. Service a water-cooled condenser.
 8. Analyze the data of commercial cooling unit.
 9. Operate cascade/2 stage system.
 10. Operate a residential air conditioning system.
 11. Operate a combination heating/cooling system.
 12. Check a residential central air conditioning system.
 13. Locate trouble in a heat pump.
 14. Adjust thermostatic expansion valve.
 15. Adjust automatic expansion valve.
 16. Estimate the refrigeration load for a walk-in cooler.
- F. LEARNING OUTCOMES (MNTC): NA
- G. METHODS FOR EVALUATION OF STUDENT LEARNING: Methods may include but are not limited to:
1. Lab activities
 2. Quizzes and Tests
- H. RCTC CORE OUTCOME(S). This course contributes to meeting the following RCTC Core Outcome(s): Communication. Students will communicate appropriately for their respective audiences.
- Critical Thinking. Students will think systematically and explore information thoroughly before accepting or formulating a position or conclusion.
- I. SPECIAL INFORMATION (if any): None