



CP03009: REFRIGERATION AND FREEZING TECHNOLOGY FOR FOOD PRESERVATION



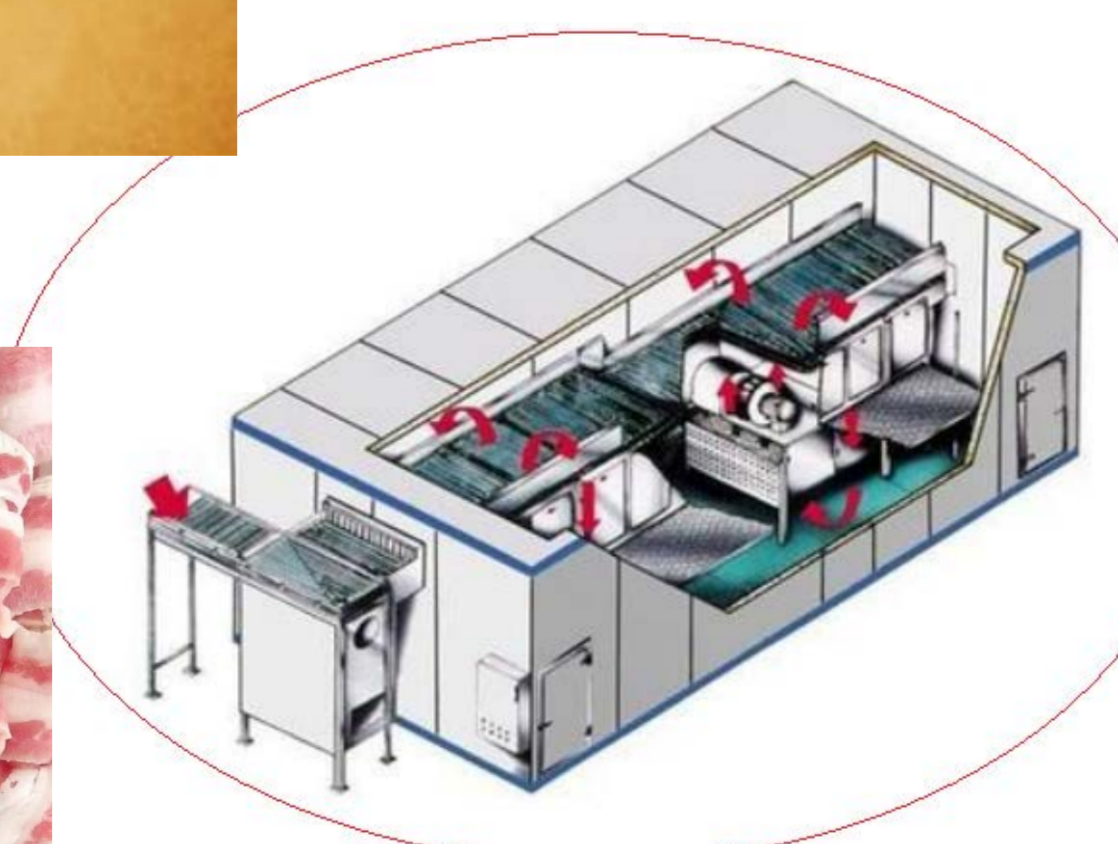
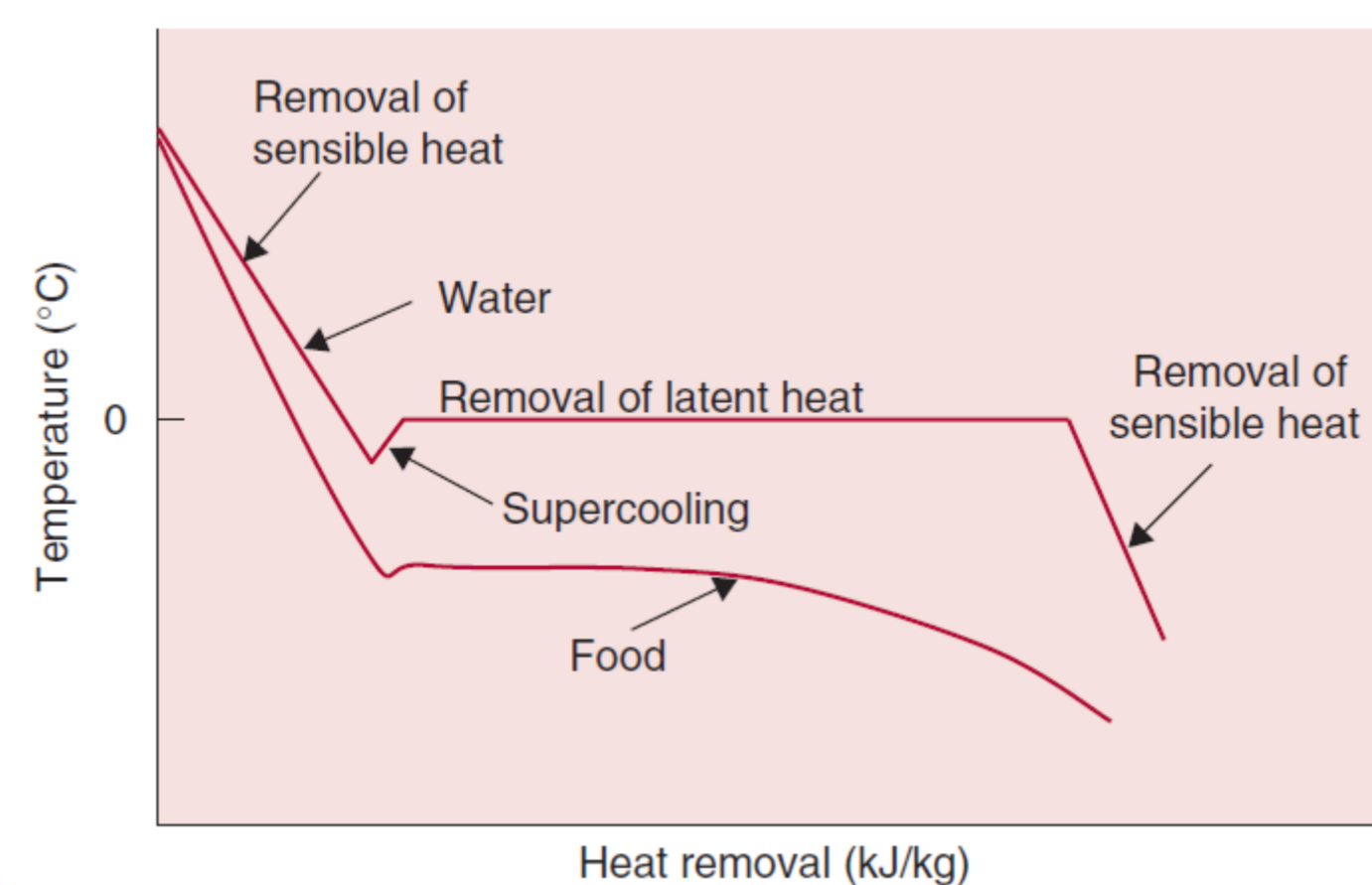
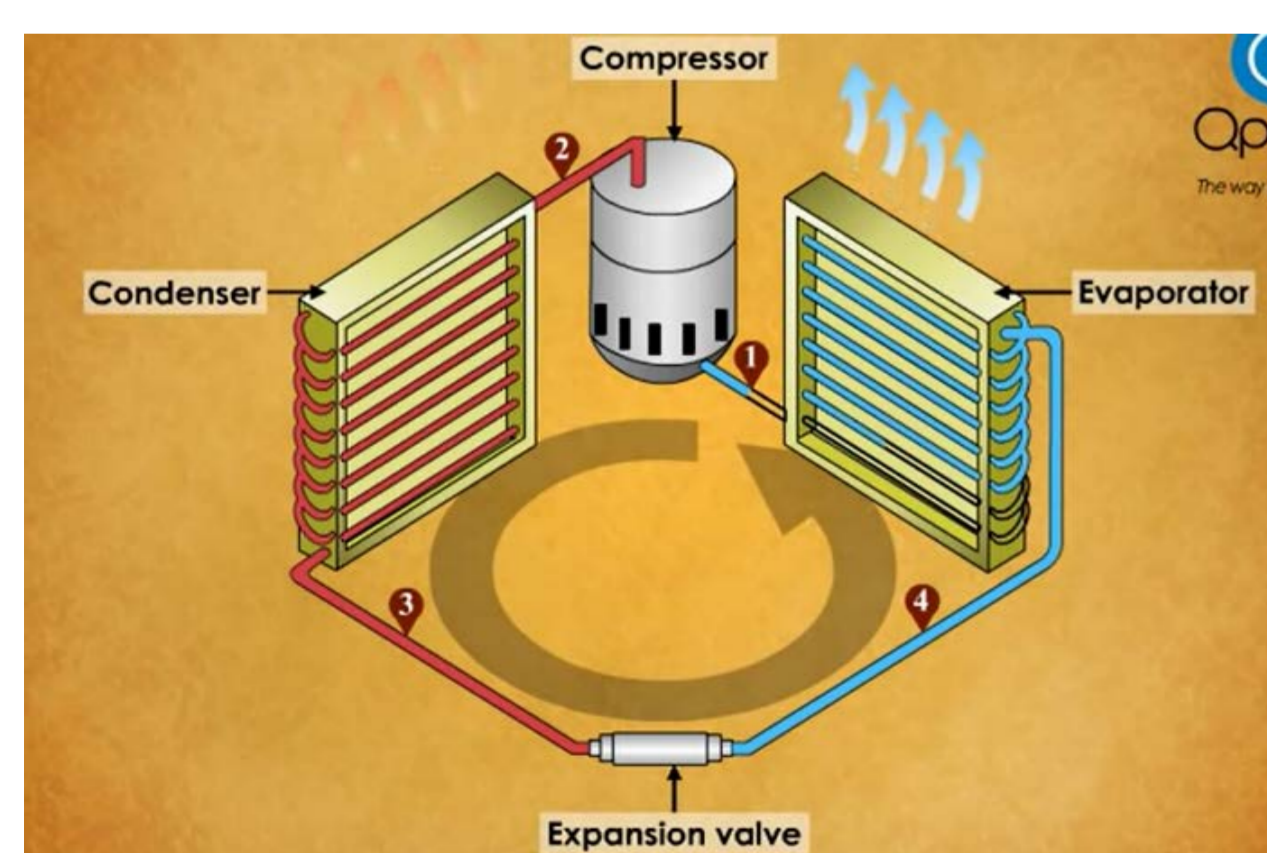
CREDITS: 2 (Lecture: 1.5 – Practice: 0.5)

COURSE EXPECTED LEARNING OUTCOMES

NOTATION	Course expected learning outcomes After successfully completing this course, students are able to:	Program expected learning outcomes
KNOWLEDGE		
K1	Distinguish cooling and freezing processes, explain the principle of the compression refrigeration system.	ELO3
K2	Explain impact of cooling or freezing process as well as low temperature storage on quality of food.	ELO3, ELO4
K3	Analyze advantages and disadvantages of several methods and techniques of refrigerating or freezing foods being used	ELO4
K4	Apply refrigeration and freezing techniques, parameters of low temperature storage process to prolong shelf life of fresh agricultural products as well as processed food products, thereby propose suitable technological parameters and equipment for refrigeration or freezing of common food products.	ELO5
SKILLS		
K5	Assess quality of refrigerated or frozen food products.	ELO13
K6	Control quality of cold and frozen food products and propose solutions to improve their quality.	ELO8, ELO13
ETHICS AND ATTITUDES		
K7	Take the initiative in finding and synthesizing information related to the course.	ELO15

COURSE DESCRIPTIONS

Concepts and basic principles of refrigeration. Basic thermodynamics for refrigeration; Principles and equipment of food refrigeration; Principles and equipment of food freezing; Technological parameters and equipment of refrigeration and freezing of food for preservation; Principles, techniques for thawing of frozen food; Processing technology of several frozen food products.



LEARNING METHODS

- ❖ Listening, recording, proposing questions and discussing.
- ❖ Reading before class, preparing assignment, answering questions.
- ❖ Participating in practice class
- ❖ E-learning

STUDENT TASKS

- Attendance in class: All students of the course must attend at least 75% of class.
- Preparation for class: All students of the course must review lesson content before class and read references introduced in the list of reference.
- Group presentation: All students must do their assignment and participate in group presentation.

ASSESSMENT METHODS

- ❑ Grading: 10
- ❑ Average score of course is the total points of rubrics multiplied by the respective weight of each rubric.
- ❑ Group discussion: 20%; Practice: 20%; Final examination (essay): 60%.

LECTURERS IN CHARGE

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