59th Offering of the Industrial Refrigeration Workshop

A Virtual Course Offering, April 13-17 and continuing April 20-23, 2026

About the workshop: This workshop is a virtual offering of the long-running course on industrial refrigeration as practiced in food freezing, refrigeration, and other low-temperature applications. A systematic study is made of the technical background, the practice, and the latest developments in low temperature refrigeration. Starting in 1982, this is the 59th offering of the workshop.

For whom: Engineers and supervisors employed by equipment manufacturers, design firms, refrigerated warehouses, food processors, contractors, and chemical firms. The course is intended for designers and builders of new or enlarged plants, supervisors of plant operations, engineers for manufacturers who will learn how their components fit into systems, engineers, and managers either new to the industrial refrigeration field, or veteran engineers and managers seeking a refresher. Also, the workshop is intended for those making decisions concerning the plant or facility.

Objectives: Our objective is to provide participants with much of the knowledge that they would otherwise obtain through industry experience, often with the agony of costly mistakes. We hope that participants will gain a thorough technical grounding in topics crucial to industrial refrigeration; benefit from the experiences of a group of longtime industry professionals; and learn about the latest research and developments relevant to industrial refrigeration.

Topics to be covered: Refrigerant properties, single-, two-stage, and cascade refrigeration cycles, load calculations, construction of refrigerated buildings, liquid recirculation systems, reciprocating and screw compressors, performance and selection of evaporator coils, condensers, energy conservation, vessel sizing, liquid pumps, pipe sizing, safety, and control of both halocarbon and ammonia systems.

A thread that will extend throughout the two-week course will be the design of an ammonia refrigeration system serving a food distribution center that incorporates selected low-charge technology. Refrigeration equipment and systems used in this hypothetical facility are typical of a wide variety of applications.

CEUs are available: Participants may receive a Continuing Education Certificate reporting 36 contact hours, which will provide documentation for engineering (or other) Professional Development Hour (PDH) or Continuing Education Unit (CEU) requirements.

Workshop sponsor: The workshop is sponsored by the International Institute of Ammonia Refrigeration (IIAR), an association of manufacturers, designers, contractors and end users of industrial refrigeration equipment and systems.

Workshop leader: The director of our workshop is Emeritus Professor Donald L. Fenton of Kansas State University in Manhattan, KS. For answers to questions about the program content, or anything regarding the workshop, please contact Don at (785) 341-8375 or fenton@ksu.edu

Internet-based Workshop platform: All sessions will take place as a synchronous online education program administered by the IIAR Staff at iiar.org.

Workshop staff
Director and Instructor: Don Fenton, Kansas State University (Manhattan, KS)

Industry Staff:
Mike Lynch, US Cold Storage (Camden, NJ)
Cory Groves, Evapco (Taneytown, MD)
John Murdaugh, Burns and McDonnell (Phoenix, AZ)
Don Faust, Frick (Waynesboro, PA)
Laura Marshall, Baltimore Air Coil (Jessup, MD)

Schedule: The workshop begins Monday, April 13, 12:00 PM-5:00 PM Eastern Daylight Savings (U.S.) time, through Friday, April 17. We'll then reconvene on Monday, April 20, 12:00 PM-5:00 PM through Thursday, April 23. Short evening study assignments will be typical.

NOTE: Of special interest is the optional "Quick-Start" pre-recorded presentation that is recommended as a technical introduction or a refresher session covering refrigeration fundamentals available on-line about a week before the workshop starts. There is no additional cost for the Quick-Start and is highly recommended by past participants.

All materials will be made available via the IIAR Learning Management System platform. Details on accessing these resources will be emailed directly to each participant after registration.

This program will be delivered live online through the IIAR Learning Management System during the dates and times noted below. Each participant will be expected to interact in real-time with instructors and other participants.

Access to a digital resource allowing audio and visual communication is required. Each participant will be automatically placed on mute at the beginning of each session with the ability to unmute themselves to ask questions directly to the instructor. More information regarding online etiquette

and IT requirements will be included in supplemental materials emailed to each participant after registration.

ALL TIMES EASTERN U.S.

Monday, April 13, 12:00 PM-5:00 PM
Topic: Refrigeration load calculation, food refrigeration, design project, refrigerated facilities

Tuesday, April 14, 12:00 PM-5:00 PM
Topic: Refrigeration cycle, design project refrigeration loads, facility construction features

Wednesday, April 15, 12:00 PM-5:00 PM
Topic: Evaporator coils, air-coil construction, liquid recirculation, application of air cooling coils

Thursday, April 16, 12:00 PM-5:00 PM
Topic: Psychometrics, selection of design project evaporators, coil defrost controls, two-stage and cascade refrigeration

Friday, April 17, 12:00 PM-5:00 PM
Topic: Refrigerant line pressure drop, liquid recirculation systems, vessel design, recommended practices

Monday, April 20, 12:00 PM-5:00 PM
Topic: Piping, vessel, and pump selection for project, energy conservation, safety

Tuesday, April 21, 12:00 PM-5:00 PM
Topic: Reciprocating compressors, performance of condensers, operation and construction of condensers

Wednesday, April 22, 12:00 PM-5:00 PM
Topic: Screw compressors, application of screw compressors, application of evaporative condensers

Thursday, April 23, 12:00 PM-5:00 PM
Topic: Refrigerant choices, selection of compressors for design project, selection of condensers for design project

Workshop cost: The cost of the workshop is $1750 for IIAR Members and $2350 for non-IIAR members. Discounts apply to more than three people from the same organization; contact IIAR for pricing (info@iiar.org).

There are three ways to register:

1. Register ONLINE by going to www.iiar.org and click on "Registration."
2. CALL IIAR directly at +1 (703) 312-4200
3. Send an EMAIL to IIAR at info@iiar.org

In order to encourage personal contact between the participants and staff, **registration is limited**. Early registration is encouraged. Registration will be on a first-come, first-served basis. Payment must be made to reserve space.

Refund/Cancellation Policy: If you must cancel your registration, please do so as soon as possible. The cancellation policy is: Full refund if canceled by March 23, 2026; $200 cancellation charge between March 23, 2026, and March 30, 2026; and no refunds offered after March 30, 2026. A substitute may replace the original registrant with a written request.

Required Textbooks: All participants are required to have access to the *Industrial Refrigeration Handbook* by Wilbert F. Stoecker available at the sites below and others:

- https://www.accessengineeringlibrary.com/content/book/9780070616233
- https://www.amazon.com/Industrial-Refrigeration-Handbook-Wilbert-Stoecker/dp/007061623X