DATE OF LAST REVIEW: 02/2013

CIP CODE: 47.0201

SEMESTER: Departmental Syllabus

COURSE TITLE: Refrigeration 1

COURSE NUMBER: HVAC0228

CREDIT HOURS: 3

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: HVAC0101

Required Text and Materials: Please check with the KCKCC bookstore, http://www.kckccbookstore.com/, for the required texts for your particular class.

Course Description:
This course will introduce students to domestic refrigerators. The course will begin with a brief description of the refrigeration process and proceed with various types of evaporators and evaporator defrosts.

Method of Instruction:
A variety of instructional methods may be used depending on content area. They may include but are not limited to lecture, multimedia, cooperative/collaborative learning, demonstrations, labs, on-the-job, internships, and other learning experiences outside the classroom. Methodology will be selected to best meet student needs.
COURSE OUTLINE:
I. Application of Refrigeration Systems
   A. Application Decisions
   B. Remote Condensing Unit Equipment
   C. Multiple Evaporators and Single Compressor Applications
   D. Walk In Refrigeration
   E. Refrigeration Piping
   F. Ice Making Equipment
   G. Defrost
   H. Condensate Removal

EXPECTED LEARNER OUTCOMES:
A. The student will be able to demonstrate an understanding of the different types of display equipment.
B. The student will be able to demonstrate an understanding of remote condensing application.
C. The student will be able to demonstrate an understanding of mullion heat.
D. The student will be able to demonstrate an understanding of the various defrost methods.
E. The student will be able to discuss walk in refrigeration applications.
F. The student will be able to demonstrate an understanding of ice making equipment.

Course Competencies:
Upon successful completion of this course.

The student will be able to demonstrate an understanding of the different types of display equipment.
1. The student will be able to describe the chest display unit.
2. The student will be able to describe the upright display unit.
3. The student will be able to describe the open-air display unit.
4. The student will be able to explain if closed; are doors single, double, triple pane, or metal.
5. The student will be able to demonstrate a package or split-system.

The student will be able to demonstrate an understanding of remote condensing application
6. The student will be able to demonstrate knowledge of mechanical rooms, roof top units, basement locations for condensing units.

The student will be able to demonstrate an understanding of mullion heat.
7. The student will be able to demonstrate the electrical rods that generate heat for defrost.
8. The student will be able to demonstrate the used in residential refrigerators and open cases displays.
9. The student will be able to explain the operation of a timed control device.
The student will be able to demonstrate an understanding of various defrost methods.

10. The student will be able to explain hot gas defrost.
11. The student will be able to demonstrate a mullion defrost element.
12. The student will be able to demonstrate a timed defrost cycle.
13. The student will be able to explain the temperature defrost cycle.

The student will be able to discuss walk in refrigeration applications.

14. The student will be able to demonstrate the walk in type of freezers.
15. The student will be able to demonstrate the walk in type of coolers.
16. The student will be able to explain the walk in type of chillers.

The student will be able to demonstrate an understanding of ice making equipment.

17. The student will be able to explain production of ice flakes.
18. The student will be able to demonstrate production of ice cubes.
19. The student will be able to explain production of crush ice.
20. The student will be able to explain production of block ice.
21. The student will be able to explain production of snow ice.

ASSSESSMENT OF LEARNER OUTCOMES:

Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

Special Notes:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact the Director of the Academic Resource Center at (913) 288-7670 V/TDD.