

RARITAN VALLEY COMMUNITY COLLEGE ACADEMIC COURSE OUTLINE

ECTC 290 Environmental Control Technology Cooperative Education

I. Basic Course Information

A. Course Number and Title: ECTC 290 - Environmental Control Technology
Cooperative Education

B. New or Modified Course: Modified

C. Date of Proposal: Fall 2022

D. Effective Term: Spring 2023

E. Sponsoring Department: Business and Public Service

F. Semester Credit Hours: 1

G. Weekly Contact Hours: Lecture: 0 hours
 Work Site: 45 hours
 Out of class student work per week: 0 hours

H. ☒ Prerequisite (s): ECTC 101 Refrigeration I, ECTC 102 Air Conditioning Systems Design, ECTC 103 Electricity for Environmental Control I, ECTC 104 Electricity for Environmental Control II, ECTC 202 Heating Systems Design and ECTC 206 Residential HVAC Controls & Instrumentation **or permission and placement by Program Coordinator**

☐ Corequisite (s): None

☐ Prerequisite (s) and Corequisite (s):

I. Additional Fees: None

J. Name and e-Mail Address of

Department Chair: Tracy Rimple, Tracy.Rimple@raritanval.edu

Divisional Dean: Patrice Marks, Patrice.Marks@raritanval.edu

II. Catalog Description

Prerequisites: ECTC 101 Refrigeration I, ECTC 102 Air Conditioning Systems Design, ECTC 103 Electricity for Environmental Control I, ECTC 104 Electricity for Environmental Control II, ECTC 202 Heating Systems Design, and ECTC 206 Residential HVAC Controls & Instrumentation; or permission and placement by Program Coordinator. This course serves as an introductory work program in a component of Environmental Control Technology work that



provides an experiential learning opportunity for students interested in pursuing a career in Heating, Ventilating, Air Conditioning and Refrigeration. Students will be exposed to the roles performed by Installers, Maintenance and Service Technicians. Students will be encouraged to observe and critically analyze the day-to-day operation of the contracting firm for which they will work and apply theoretical as well as practical concepts learned in the classroom to the work environment.

III. Statement of Course Need

- A. Cooperative education opportunities are an integral part of the experiential learning process for students seeking careers in HVAC/R. This course will afford the student an opportunity to connect the academic material with the day-to-day operations of HVAC/R Contracting firms. By interacting with practitioners, students develop marketable skills and begin to establish valuable networks. Through observation and participation, students are better informed to decide on career choices.
- B. This course consists of 45 hours in an HVAC/R contracting business.
- C. This course generally transfers as a free elective, but it also serves as a Program Elective to Pennsylvania College of Technology for those students graduating with the AAS in Environmental Control Technology who are interested in pursuing B.S. degree at that institution.

IV. Place of Course in College Curriculum

- A. Free Elective
- B. This course fulfills a requirement for the A.A.S. Environmental Control Technology Program.
- C. Course transferability: a) for New Jersey schools go to the NJ Transfer website, www.njtransfer.org; b) For all other colleges and universities go their individual websites.

V. Outline of Course Content

- A. Outside Work Experience
 - 1. Work for a Commercial Contractor or in a Commercial facility
 - a. Create personal goals related to work experience
 - b. Perform duties in a professional manner
- B. Meet bi-weekly, as necessary, with program coordinator
 - 1. Create and submit a resume
 - 2. Complete and submit reports at the end of each week
 - 3. Submit Final Paper on Work Experience

VI. Course Learning Outcomes

A. Outcomes

At the completion of the course, students will be able to:

1. Gain practical experience in the environmental control technology field using skills taught and practiced in the classroom through work in an outside firm. (GE-NJ 3).
2. Demonstrate skills learned during practical training in accordance with the written objectives approved for each student. (GE-NJ 4).

B. Assessment Instruments

1. Completion of work hours
2. Completion and submittal of weekly reports
3. Meetings and/or Conference calls with co-op coordinator

VII. Grade Determinants

- A. On-site performance.
- B. Job-site reports.
- C. Submission of required documentation.

Modes of Teaching and Learning used in the Course:

- A. Individual discussion.
- B. Reading Assignments.
- C. Instructor feedback.

VIII. Texts and Materials

Determined by student's specific work site.

(Please Note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.)

IX. Resources

- A. Reference books
- B. Safety equipment training
- C. Equipment manufacturer technical literature
- D. Instructional videos/DVDs
- E. HVAC shop/office facility by mentor organization

X. Honors Option

Not applicable