

# PROGRAM PLANNING GUIDE

## AIR CONDITIONING, HEATING, AND REFRIGERATION TECHNOLOGY A35100A - Commercial Refrigeration Track

Replaces Curriculum Schedule with Revision Date: FA2024

Date Revised: FA2025

### CURRICULUM BY SEMESTER

|                 |     |                               |                |               | Hours Per Week |     | Credits | Semesters Offered |
|-----------------|-----|-------------------------------|----------------|---------------|----------------|-----|---------|-------------------|
| Course No.      |     | Course Title                  | Pre-Requisites | Co-Requisites | Class          | Lab |         |                   |
| Fall Semester 1 |     |                               |                |               |                |     |         |                   |
| AHR             | 110 | Introduction to Refrigeration | None           | None          | 2              | 6   | 5       | FA, SP            |
| AHR             | 111 | HVACR Electricity             | None           | None          | 2              | 2   | 3       | FA, SP, SU        |
| AHR             | 112 | Heating Technology            | None           | None          | 2              | 4   | 4       | FA, SP            |
| AHR             | 180 | HVACR Customer Relations      | None           | None          | 1              | 0   | 1       | FA, SP            |
| AHR             | 213 | HVACR Building Code           | None           | None          | 1              | 2   | 2       | FA, SP            |
| ACA             | 115 | Success & Study Skills        | None           | None          | 0              | 2   | 1       | FA, SP            |

|                   |                      |                    |      |   |   |   |        |  |
|-------------------|----------------------|--------------------|------|---|---|---|--------|--|
| Spring Semester 1 |                      |                    |      |   |   |   |        |  |
| AHR 113           | Comfort Cooling      | None               | None | 2 | 4 | 4 | FA, SP |  |
| AHR 114           | Heat Pump Technology | AHR 110 or AHR 113 | None | 2 | 4 | 4 | FA, SP |  |
| AHR 133           | HVAC Servicing       | AHR 112 or AHR 113 | None | 2 | 6 | 4 | FA, SP |  |
|                   | English Elective     |                    |      | - | - | 3 |        |  |
|                   | Major Elective       |                    |      |   |   | 1 |        |  |

|                   |                             |                               |      |   |   |   |    |  |
|-------------------|-----------------------------|-------------------------------|------|---|---|---|----|--|
| Summer Semester 1 |                             |                               |      |   |   |   |    |  |
| AHR 115           | Refrigeration Systems       | AHR 110                       | None | 1 | 3 | 2 | SU |  |
| AHR 125           | HVACR Electronics           | AHR 111 or ELC 111 or ELC 112 | None | 2 | 2 | 3 | SU |  |
| BAT 111           | Building Automation Systems | None                          | None | 1 | 3 | 2 | SU |  |
|                   | Social Science Elective     |                               |      | - | - | 3 |    |  |

|                 |                           |         |      |   |   |   |        |  |
|-----------------|---------------------------|---------|------|---|---|---|--------|--|
| Fall Semester 2 |                           |         |      |   |   |   |        |  |
| AHR 211         | Residential System Design | None    | None | 2 | 2 | 3 | FA, SP |  |
| AHR 212         | Advanced Comfort Systems  | AHR 114 | None | 2 | 6 | 4 | FA     |  |
| AHR 235         | Refrigeration Design      | AHR 110 | None | 2 | 2 | 3 | FA     |  |
|                 | Math Elective             |         |      | - | - | 3 |        |  |
|                 | Major Elective            |         |      |   |   | 2 |        |  |

# PROGRAM PLANNING GUIDE

| Spring Semester 2 |     |                        |                               |      |   |   |          |
|-------------------|-----|------------------------|-------------------------------|------|---|---|----------|
|                   |     | Communication Elective |                               |      | - | - | 3        |
|                   |     | Humanities Elective    |                               |      | - | - | 3        |
| REF               | 116 | Commercial Systems I   | AHR 115                       | None | 2 | 6 | 4 FA, SP |
| REF               | 117 | Refrigeration Controls | AHR 110 or AHR-111 or ELC-111 | None | 2 | 6 | 4 FA, SP |

Graduation Requirement Credit Hours: 71

## MAJOR ELECTIVES

|  |              |                              |                          | Hours Per Week |     | Credits | Semesters Offered |
|--|--------------|------------------------------|--------------------------|----------------|-----|---------|-------------------|
| Course No.                             | Course Title |                              |                          | Class          | Lab |         |                   |
| Major Electives Credit Hours Needed: 3 |              |                              |                          |                |     |         |                   |
| AHR                                    | 160          | Refrigerant Certification    | None                     | None           | 1   | 0       | 1 SU              |
| AHR                                    | 250          | HVAC System Diagnostics      | AHR 133                  | None           | 0   | 4       | 2 FA, SP          |
| BAT                                    | 231          | BAS Integration              | BAT 111                  | None           | 3   | 3       | 4 SP              |
| BAT                                    | 251          | Building Automation Controls | BAT 111                  | None           | 2   | 3       | 3 SP              |
| WBL                                    | 111DD        | Work-Based Learning I        | 14 program credits hours | None           | 0   | 10      | 1 FA, SP, SU      |
| WBL                                    | 112DD        | Work-Based Learning I        | 14 program credits hours | None           | 0   | 20      | 2 FA, SP          |

## ENGLISH ELECTIVES

|  |              |   |                       | Hours Per Week        |     | Credits | Semesters Offered |
|--|--------------|---|-----------------------|-----------------------|-----|---------|-------------------|
| Course No.                             | Course Title |   |                       | Class                 | Lab |         |                   |
| Major Electives Credit Hours Needed: 3 |              |   |                       |                       |     |         |                   |
| ENG                                    | 110          | Freshman Composition                      | ENG 002 (If required) | None                  | 3   | 0       | 3 FA, SP, SU      |
| ENG                                    | 111          | Writing and Inquiry (University Transfer) | ENG 025 (If required) | ENG 045 (If required) | 3   | 0       | 3 FA, SP, SU      |

## COMMUNICATION ELECTIVES

|  |              |                                   |                                  | Hours Per Week |     | Credits | Semesters Offered |
|--|--------------|-----------------------------------|----------------------------------|----------------|-----|---------|-------------------|
| Course No.                             | Course Title |                                   |                                  | Class          | Lab |         |                   |
| Major Electives Credit Hours Needed: 3 |              |                                   |                                  |                |     |         |                   |
| COM                                    | 120          | Intro Interpersonal Communication | ENG 002 or ENG 025 (If required) | None           | 3   | 0       | 3 FA, SP, SU      |
| COM                                    | 231          | Public Speaking                   | ENG 111                          | None           | 3   | 0       | 3 FA, SP, SU      |

# PROGRAM PLANNING GUIDE

## HUMANITIES ELECTIVES

|                 |     |                        |                                     |      | Hours Per Week |     | Credits | Semesters Offered |
|-----------------|-----|------------------------|-------------------------------------|------|----------------|-----|---------|-------------------|
| Course No.      |     | Course Title           |                                     |      | Class          | Lab |         |                   |
| Major Electives |     | Credit Hours Needed: 3 |                                     |      |                |     |         |                   |
| HUM             | 110 | Technology and Society | ENG 002 or ENG 025<br>(If required) | None | 3              | 0   | 3       | FA, SP, SU        |
| HUM             | 115 | Critical Thinking      | ENG 002, ENG 025, or<br>ENG 111     | None | 3              | 0   | 3       | FA, SP, SU        |

## SOCIAL SCIENCE ELECTIVES

|                 |     |  |                                  |      | Hours Per Week |     | Credits | Semesters Offered |
|-----------------|-----|--|----------------------------------|------|----------------|-----|---------|-------------------|
| Course No.      |     | Course Title                             |                                  |      | Class          | Lab |         |                   |
| Major Electives |     | Credit Hours Needed: 3                   |                                  |      |                |     |         |                   |
| PSY             | 118 | Interpersonal Psychology                 | None                             | None | 3              | 0   | 3       | FA, SP, SU        |
| PSY             | 150 | General Psychology (University Transfer) | ENG 002 or ENG 025 (If required) | None | 3              | 0   | 3       | FA, SP, SU        |

## MATH ELECTIVES

|                 |              |   |  |      |       | Hours Per Week |   | Credits    | Semesters Offered |
|-----------------|--------------|---|--|------|-------|----------------|---|------------|-------------------|
| Course No.      | Course Title |   |  |      | Class | Lab            |   |            |                   |
| Major Electives |              | Credit Hours Needed: 3                    |  |      |       |                |   |            |                   |
| MAT             | 110          | Math Measurement and Literacy             | MAT 003, MAT 010, or MAT 045M (If required)  | None | 2     | 2              | 3 | FA, SP, SU |                   |
| MAT             | 121          | Algebra/Trigonometry I                    | MAT 003, MAT 021, MAT 035, or MAT 045A (If required)                                     | None | 2     | 2              | 3 | FA, SP, SU |                   |
| MAT             | 171          | Precalculus Algebra (University Transfer) | ENG 002 or ENG 025 (If required)<br>MAT 003, MAT 035, MAT 071, or MAT 045P (If required) | None | 3     | 2              | 4 | FA, SP, SU |                   |