

# AIR CONDITIONING AND REFRIGERATION (CERTIFICATE T0909)

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## Technology and Health Division

### Certificate T0909

This program is designed to prepare the student for employment in the broad field of air conditioning, heating, and refrigeration. It leads to occupations in design, manufacturing, operation, sales, distribution, installation, maintenance, and repair. Students desiring a Bachelor's Degree (transfer program) should consult with an advisor to discuss transferability of courses.

### Required Courses

Course Prefix	Course Name	Units
AIRC 10	Technical Mathematics in Air Conditioning and Refrigeration	2
AIRC 11	Welding for Air Conditioning and Refrigeration	2
AIRC 12	Air Conditioning Codes and Standards	3
AIRC 20	Refrigeration Fundamentals	4
AIRC 25	Electrical Fundamentals for Air Conditioning and Refrigeration	5
AIRC 26	Gas Heating Fundamentals	2
AIRC 30	Heat Load Calculations and Design	4
AIRC 31	Commercial Electrical for Air Conditioning and Refrigeration	4
AIRC 32A	Air Properties and Measurement	1.5
AIRC 34	Commercial Systems	4
<b>Total Units</b>		<b>31.5</b>

Air Conditioning and Refrigeration Website (<http://www.mtsac.edu/airconditioning/>)

### Program Learning Outcome

*Upon successful completion of this program, a student will be able to:*

- Properly handle refrigerants based on Section 608 of the clean air act.
- Evaluate, troubleshoot, and modify the electrical, mechanical and air side operation of an air conditioning or refrigeration system.
- Perform a residential heat load calculation, select the equipment, and size the ductwork based on ACCA's Manual J8 and Manual D.
- Select equipment and components for commercial refrigeration systems.

Review Student Learning Outcomes (SLOs) (<http://www.mtsac.edu/instruction/outcomes/sloinfo.html>) for this program.