

Northwest Louisiana Technical College

Air Conditioning and Refrigeration Technician

Program Description & Curriculum

Revised March 2017

Effective January 2018

The purpose of this program is to provide specialized classroom instruction and practical shop experience to prepare students for employment in a variety of jobs in the field of heating, air conditioning, and refrigeration. The Air Conditioning and Refrigeration program prepares individuals to install, diagnose, repair, and maintain the operating condition of domestic, residential, and commercial heating air conditioning, and refrigeration systems.

Degrees/Certificates:

Technical Diploma (TD)

Certificate of Technical Studies (CTS)

Technical Competency Area (TCA)

Available degrees and certificates may vary at each campus. Check with your local campus for more information.
CIP 470201

Course # -- Course Title	Lecture/Lab Hours	Credit Hours	Clock Hours
HACR 1150 HVAC Introduction	1/2	3	100
HACR 1160 Principles of Refrigeration I	1/2	3	115
HACR 1170 Principles of Refrigeration II	1/2	3	115
HACR 1180 Principles of Refrigeration III	1/2	3	120
TCA – HVAC Helper I		12	450
HACR 1210 Electrical Fundamentals	1/2	3	100
HACR 1220 Electrical Components	1/2	3	115
HACR 1230 Electric Motors	1/2	3	115
HACR 1240 Applied Electricity and Troubleshooting 1/2		3	120
CTS – HVAC Helper II		24	900
HACR 1410 Domestic Refrigeration	1/1	2	75
HACR 1420 Room Air Conditioners	1/1	2	75
CTS - Domestic A/C & Refrigeration Technician		28	1050
HACR 2510 Residential Central Air Conditioning I 1/2		3	115
HACR 2520 Residential Central Air Conditioning II 1/1		2	115
HACR 2530 Residential System Design	1/1	2	75
HACR 2540 Residential Heating I	1/2	3	115
HACR 2550 Residential Heating II	1/2	3	115
HACR 2560 Residential Heat Pumps	1/1	2	80
JOBS 2450 Job Seeking Skills	2/0	2	30

Successful completion of TCA Helper I, CTS Helper II, and CTS Domestic A/C Refrigeration Tech, and completion of above seven courses:

TD – Residential A/C & Refrigeration Technician 45 1695

Course # -- Course Title Lecture/Lab Hours -- Credit Hours -- Clock Hours

Additional Exit Point:

HACR2510 Residential Central Air Conditioning I 1/2 3 115

SOLR 1000 Solar Fundamentals 3/0 3 45

SOLR 1030 Solar Thermal Applications 1/2 3 75

Successful completion of CTS Helper II plus above 3 courses.

CTS – HACR Energy Systems Technician 33 1135

HACR 2810 Commercial Air Conditioning I 2/4 6 265

HACR 2820 Commercial Air Conditioning Controls 3/4 7 65

HACR 2830 Commercial Air Conditioning II 2/4 6 235

Successful completion of TCA Helper 1, CTS Helper II, JOBS 2450, and the above 3 courses.

TD– Commercial Air Conditioning Technician 45 1695

HACR 2910 Commercial Refrigeration I 2/4 6 265

HACR 2920 Commercial Refrigeration Controls 3/4 7 265

HACR 2930 Commercial Refrigeration II 2/4 6 235

Successful completion of TCA Helper I, CTS Helper II, JOBS 2450, and the above 3 courses.

TD – Commercial Refrigeration Technician 45 1695

Transferrable General Education Courses Required for AAS

ENGL 1015 English Composition I 3/0 3 45

MATH 1015 College Algebra 3/0 3 45

PSYC 2015 Introduction to Psychology 3/0 3 45

PHSC 1015 Physical Science 3/0 3 45

SPCH 1015 Introduction to Public Speaking 3/0 3 45

AAS – Air Conditioning and Refrigeration 60 1575

Optional Electives

CPTR 1000 Introduction to Computers 1/1 2 45

CSRV 1000 Customer Service 3/0 3 45

CSRV 2000 Customer Service & Sales 3/0 3 5

ENTP 1000 Foundation of Entrepreneurship 3/0 3 45

SOLR 1000 Solar Fundamentals 3/0 3 45

SOLR 1010 PV Solar Applications 1/2 3 75

SOLR 1020 Industrial Solar Applications 1/2 3 75

SOLR 1030 Solar Thermal Applications 1/2 3 75

The following courses may be substituted for the above course requirements with approval from Chief Academic Officer.

SPPR 2991 Special Projects I 0/1 1 30

SPPR 2993 Special Projects II 0/2 2 60

SPPR 2995 Special Projects III 0/3 3 90

Course # -- Course Title	Lecture/Lab Hours	-- Credit Hours	-- Clock Hours
SPPR 2996 Special Projects IV	3/0	3	45
SPPR 2998 Special Projects V	1/0	1	15
SPPR 2997 Practicum	0/3	3	135
SPPR 2999 Cooperative Education	0/3	3	135
Additional TCA Exit Point:			
SOLR 1000 Solar Fundamentals	3/0	3	45
SOLR 1010 PV Solar Applications	1/2	3	75
SOLR 1020 Industrial Solar Applications	1/2	3	75
SOLR 1030 Solar Thermal Applications	1/2	3	75
TCA – Solar Systems Installer		12	270