

Northwest Louisiana Technical College

Air Conditioning and Refrigeration Technician

Program Description & Curriculum

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

Air Conditioning and Refrigeration Technician CURRICULUM				
Course #	Course Title	Lecture /Lab Hours	Credit Hours	Clock Hours
HACR 1150	HVAC Introduction	1/2	3	90
HACR 1160	Principles of Refrigeration I	1/2	3	90
HACR 1170	Principles of Refrigeration II	1/2	3	90
HACR 1180	Principles of Refrigeration III	1/2	3	90
TCA – HVAC Helper I			12	360
HACR 1210	Electrical Fundamentals	1/2	3	90
HACR 1220	Electrical Components	1/2	3	90
HACR 1230	Electric Motors	1/2	3	90
HACR 1240	Applied Electricity and Troubleshooting	1/2	3	90
CTS – HVAC Helper II			24	720
HACR 1410	Domestic Refrigeration	1/1	2	60
HACR 1420	Room Air Conditioners	1/1	2	60
CTS - Domestic A/C & Refrigeration Technician			28	840
HACR 2510	Residential Central Air Conditioning I	1/2	3	90
HACR 2520	Residential Central Air Conditioning II	1/1	2	75
HACR 2530	Residential System Design	1/1	2	60
HACR 2540	Residential Heating I	1/2	3	105
HACR 2550	Residential Heating II	1/2	3	90
HACR 2560	Residential Heat Pumps	1/1	2	60
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:			45	1350
TD – Residential A/C & Refrigeration Technician				
<i>Additional Exit Point:</i>				
HACR2510	Residential Central Air Conditioning I	1/2	3	90
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.			33	930
CTS – HACR Energy Systems Technician				
HACR 2810	Commercial Air Conditioning I	2/4	6	210

HACR 2820	Commercial Air Conditioning Controls	3/4	7	210
HACR 2830	Commercial Air Conditioning II	2/4	6	180
<i>Successful completion of TCA Helper 1, CTS Helper II, JOBS 2450, and the above 3 courses.</i>				
TD– Commercial Air Conditioning Technician			45	1350
HACR 2910	Commercial Refrigeration I	2/4	6	210
HACR 2920	Commercial Refrigeration Controls	3/4	7	210
HACR 2930	Commercial Refrigeration II	2/4	6	180
<i>Successful completion of TCA Helper I, CTS Helper II, JOBS 2450, and the above 3 courses.</i>				
TD – Commercial Refrigeration Technician			45	1350
<i>Transferrable General Education Courses Required for AAS</i>				
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
<i>Optional Electives</i>				
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	45
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
<i>The following courses may be substituted for the above course requirements with approval from Chief Academic Officer.</i>				
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
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
<i>Additional TCA Exit Point:</i>				
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