

**Tops University Associate of Applied Science: Heating, Air Conditioning, and Refrigeration**  
*Postsecondary Partner: Nunez Community College*

**Overview**

The Heating, Air Conditioning, and Refrigeration (HACR) program utilizes technical classroom instruction and real-life, hands-on lab exercises in shop for gainful employment opportunities as entry-level air conditioning and refrigeration helpers, installers, mechanics, and technicians. Students will:

1. Demonstrate the skills needed for entry and advanced career levels in air conditioning and refrigeration.
2. Demonstrate the ability to identify and safely use tools needed for air conditioning and refrigeration repairs.
3. Evaluate, apply, and perform suggested repair or replacement of air conditioning and refrigeration equipment for normal operation.

**Capstone Credentials**

Regional (Emerging)	Basic	Advanced	Fast Forward Advanced Plus
-OSHA 30	-EPA Section 608 Certification --HACR Certificate of Technical Studies in Helper 1 and Helper 2	-EPA Section 608 Certification AND Air Conditioning -HACR Technical Diploma	-Associate of Applied Science in HACR

*\*Core Academic Course*  
*\*\*Jump Start CTE Course*

Grade 9	
Semester 1	Semester 2
*English I 120331	*English II 120332
*Algebra I 160321	*Algebra II 160322
*Physical Education I 190105	*Biology I 150301
*Physical Science 150802	*Civics 220501

Grade 10	
Semester 1	Semester 2
*English III 120333	*Geometry 160323
*World History 220401	*Biology II 150302
*1/2 Physical Education II 190106, 1/2 Health Education 190500	*US History 220403
*Foreign Language I	*Foreign Language II

*Additional and/or equivalent TOPS core aligned courses can be found in Bulletin 741.*

Grade 11			
Semester 1		Semester 2	
Postsecondary Course	LDOE Course/Code	Postsecondary Course	LDOE Course/Code
*English Comp I ENGL 1010	*English IV: DE - CENL 1013 English Composition I 120606	*College Algebra MATH 1300	*Algebra III: DE - CMAT 1213 College Algebra 160500
HVAC Introduction HACR 1150	Air Conditioning and Refrigeration I (3 credits) 310103	Electrical Fundamentals HACR 1210	Air Conditioning/Refrigeration II (3 Credits) 310113
Principles of Refrigeration I HACR 1160		Electrical Components HACR 1220	
Principles of Refrigeration II HACR 1170		Electric Motors HACR 1230	
Principles of Refrigeration III HACR 1180		Applied Electricity and Troubleshooting HACR 1240	

Grade 12			
Semester 1		Semester 2	
Postsecondary Course	LDOE Course/Code	Postsecondary Course	LDOE Course/Code
*General Chemistry I CHEM 1100 <i>(Natural Science Elective)</i>	*Chemistry I: DE - CCEM 1103 Chemistry I 150414	*Art Appreciation FIAR 1200 <i>(Humanities Elective)</i>	Fine Arts Survey: DE - CART 1023 Introduction to Visual Arts 030592
Residential Central A/C HACR 2510	Air Conditioning/Refrigeration III (3 Credits) 310116	*Introduction to Psychology PSYC 1100 <i>(Behavioral Science Elective)</i>	Psychology: DE – CPSY 2013 Intro to Psychology 225011
Residential Central A/C II HACR 2520		Residential Heat Pumps HACR 2560	Air Conditioning/Refrigeration IV (2 Credits) 310118
Residential System Design HACR 2530		Domestic Refrigeration HACR 1410	
Residential Heating 2540		Room Air Conditioners HACR 1420	
		**Job Readiness Skills INDT 2900	**DE Career Success Skills 080407

*This pathway framework is an outline of how the approved courses can be implemented. Schools may opt to rearrange the order of course sequencing in order to meet local scheduling requirements. Additionally, Fast Forward pathways are dynamic and the Jump Start Review Panel will consider course equivalents on an as needed basis.*