



32-601-1 HEATING, VENTILATION, AND AIR CONDITIONING/REFRIGERATION (HVAC/R)
31-601-2 HVAC INSTALLATION TECHNICIAN
30-601-1 REFRIGERATION ESSENTIALS
2021-22 PROGRAM CURRICULUM CHECKLIST
NORTHWOOD TECHNICAL COLLEGE
FALL 2021 START
SUPERIOR



Name/ID _____

Date _____

CATALOG NUMBER	COURSE TITLE	HOURS PER WEEK	CREDITS	REFRIGERATION ESSENTIALS TECHNICAL DIPLOMA	HVAC INSTALLATION TECHNICIAN TECHNICAL DIPLOMA <i>(Financial Aid Eligible)</i>	HEATING, VENTILATION, AND AIR CONDITIONING/REFRIGERATION (HVAC/R) TECHNICAL DIPLOMA <i>(Financial Aid Eligible)</i>
FIRST TERM						
32601300	Air Conditioning Fundamentals Prerequisite: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan <i>(This course will prepare you to take the NC3 Residential Air Flow AND NC3 Building Performance Indoor Air Quality)</i>	4 hours per week	2 credits	Refrigeration Essentials	HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601301	Basic Mechanical Fundamentals Prerequisite: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan <i>(This course will prepare you to take the NC3 Building Performance Leak Detection Certification)</i>	6 hours per week	3 credits	Refrigeration Essentials	HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601317	Refrigeration Fundamentals Prerequisite: Admission to HVAC/R Plan, Refrigeration Essentials Plan, or HVAC Installation Technician Plan <i>(This course will prepare you to take the Section 608 EPA Technician Certification AND NC3 Refrigeration Diagnostics Certification)</i>	7 hours per week	3 credits	Refrigeration Essentials	HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601303	Principles of AC/DC Corequisite: 32804325 Applied Technical Math 1 <i>(This course will prepare you to take the NC3 Test meter 575 Certification)</i>	6 hours per week	3 credits	Refrigeration Essentials	HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32804325	Applied Technical Math 1	6 hours per week	3 credits	Refrigeration Essentials	HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	FIRST TERM TOTAL	29 hours per week		14 Credits Refrigeration Essentials	14 Credits HVAC Installation Technician	14 Credits Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)

All prerequisite/corequisite courses must be completed with a grade point of 2.0 or better.

Revised 5.9.2022



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SECOND TERM						
32601304	Heating Systems Prerequisite: Admission to HVAC/R Plan or HVAC Installation Technician Plan <i>(This course will prepare you to take the Flue Gas Analysis Building Performance Instruments (BPI))</i>	4 hours per week	2 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601305	Electrical Controls & Systems <i>(This course will prepare you to take the NC3 Residential Variable Speed Motors)</i>	6 hours per week	3 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601306	HVAC/R Print Reading Prerequisite: Admission to HVAC/R Plan or HVAC Installation Technician Plan	4 hours per week	2 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601310	Sheet Metal Fabrication Prerequisite: 32601301 Basic Mechanical Fundamentals	4 hours per week	2 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32804334	Applied Technical Math 2 Prerequisite: 32804325 Applied Technical Math 1	4 hours per week	2 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32801361	Applied Communications	4 hours per week	2 credits		HVAC Installation Technician	Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32890305	Applied Information Resources	4 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	SECOND TERM TOTAL	30 hours per week			13 Credits HVAC Installation Technician	15 Credits Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)

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THIRD TERM						
32601316	Building Automation Systems Prerequisite: 32601305 Electrical Controls and Systems <i>(This course will prepare you to take the NC3/Trane: Building Automation Systems (BAS) 1 – Intro to HVAC Systems and Building Controls certification)</i>	4 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601307	Heating System Applications Prerequisites: 32601301 Basic Mechanical Fundamentals and 32601304 Heating Systems <i>(This course will prepare you to take the NC3/Trane: Residential Variable Speed Motors, NC3/Trane: Residential – Air-to-Air Heat Pumps AND NC3: Building Performance Instruments (BPI) – Installation & Diagnostics certifications)</i>	6 hours per week	3 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601309	Control Circuit Applications Prerequisite: 32601305 Electrical Controls and Systems	6 hours per week	3 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32809380	Applied Interpersonal Skills	4 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32801362	Advanced Communication Skills Prerequisite: 32801361 Applied Communications	4 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	THIRD TERM TOTAL	24 hours per week				12 Credits Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)



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FOURTH TERM						
32601308	Electronic Energy Management Prerequisite: 32601309 Control Circuit Applications	6 hours per week	3 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601311	Hydronic Heating Prerequisites: 32601301 Basic Mechanical Fundamentals and 32601304 Heating Systems <i>(This course will prepare you to take the NC3: Building Performance Instruments (BPI) – Fluid Integrity certification)</i>	6 hours per week	3 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601312	Refrigeration Applications Prerequisites: 32601300 Air Conditioning Fundamentals, 32601301 Basic Mechanical Fundamentals and, 32601317 Refrigeration Fundamentals <i>(This course will prepare you to take the ACCA A2L Refrigerant Training certification)</i>	6 hours per week	3 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
32601314	Heat Load Estimation Prerequisite: Admission to HVAC/R Plan	2 hours per week	1 credit			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	1st 8 weeks					
32601315	Geothermal Systems Prerequisites: 32601301 Basic Mechanical Fundamentals, 32601317 Refrigeration Fundamentals, 32601305 Electrical Controls and Systems	8 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
FOURTH TERM CONTINUED ON NEXT PAGE						



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	FOURTH TERM CONTINUED					
	2nd 8 weeks					
32601313	HVAC/R Electronic Troubleshooting/ Repair (WBL) Prerequisite: 32601309 Control Circuit Applications <i>(This course will prepare you to take the NC3: Building Performance Instruments (BPI) – RPM and Vibration Testing certification)</i>	8 hours per week	2 credits			Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	FOURTH TERM TOTAL	28 hours per week				14 Credits Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)
	PROGRAM REQUIREMENTS			14 Credits Refrigeration Essentials	27 Credits HVAC Installation Technician	55 Credits Heating, Ventilation, and Air Conditioning/Refrigeration (HVAC/R)

Please be advised that low enrollment class sections may be cancelled. You will be contacted by Student Services with information on other class sections available in alternate formats.

GRADUATION REQUIREMENTS: Although your academic advisor can provide guidance, you are ultimately responsible for selecting courses that meet a program's graduation requirements. If you do not take courses in the recommended sequence above, it may delay your completion of graduation requirements. A program plan GPA of 2.0 in a 4.0 grade system is required to graduate.

EARN CREDIT FOR WHAT YOU ALREADY KNOW: Visit <https://www.NorthwoodTech.edu/admissions/preparing-for-college/credit-for-prior-learning> for more information

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