

NATE Support Technician Student review checklist

Klein Cooling | Free HVAC Training Program

For students who have completed HVAC Theory and HVAC JobReady. Start with high priority, then use medium priority to strengthen weak areas. Check a topic when you can explain it without notes and work through an unfamiliar example.

HIGH PRIORITY | Review first

Topic	SkillCat courses to revisit	Be able to explain or do
☐ Safety	Safety Basics HVAC Maintenance Safety Residential Confined Spaces	Power isolation and verification; stored capacitor energy; PPE; ladders; confined-space and refrigerant hazards; safe chemical and cylinder handling.
☐ Electrical & controls	Using a Multimeter; Basic Wiring; Wiring Diagrams; Identifying Fuses & Breakers; Capacitors and Resistors; Electrical Component Checks; Nameplate Reading Guide	Select meter settings and lead positions. Interpret volts, amps, ohms and power; trace series/parallel circuits, switches, relays and loads; compare readings with ratings.
☐ Refrigeration & heat	Refrigeration 101 Refrigeration: From Vapor to Liquid Refrigeration Equipment Refrigeration Components Heat & Refrigerant Basics	Trace the four main components and refrigerant state. Explain heat transfer, pressure/temperature relationships, sensible versus latent heat, and each component's job.
☐ Heating systems	Heating Theory / Heating Basics Gas Furnace Basics Thermostats 101 Split System ID	Explain heat pump coil roles, heating calls, auxiliary versus emergency heat, defrost purpose, heat strips/sequencers, and furnace sequence and safety controls.
☐ Airflow & comfort	Airflow Systems Airflow Temperature Checks	Explain filters, ventilation, air cleaning and dehumidification. Measure dry bulb, wet bulb, RH and temperature split; choose proper probe locations and interpret results.
☐ Tools & installation	Key Hand Tools Brazing & Soldering Avoiding Install Mistakes	Focus on measuring, sheet-metal and tubing tools; ladders; brazing safety and nitrogen purging; PVC joints; fasteners; sealing and insulation. Review installation gaps with your instructor.
☐ Math & drawings	Trades Math: Strength in Numbers Jobsite Math: Conversions & Calculations Layout Math for Techs	Read a tape measure and scaled drawing. Use fractions/decimals, length and temperature conversions, ratios, area and volume. Prioritize technical calculations.

Study the listed lesson areas. When a concept appears in several courses, use the explanation that helps you understand it; course completion is already assumed.

Finish your review

Use your time where it will improve your understanding most.

MEDIUM PRIORITY | Review after the foundations

Topic	SkillCat courses to revisit	Be able to explain or do
☐ Troubleshooting	Intro to Electrical Troubleshooting	Finding and diagnosing faults; tracing current; testing motors/capacitors; simple-circuit, complex-circuit and fan-relay simulations.
☐ System types	Heating Systems Introduction to Commercial Systems Residential System Types Ductless System Parts	Compare split, packaged, ductless and furnace systems. Review staging, controls and component differences. Keep boiler/industrial detail secondary.
☐ Service instruments	Reading Pressure & Temp Analog Gauges Low-Loss Hose Fittings Essential HVAC Tools	Read P-T charts and gauges; check zero/accuracy; connect safely; calculate basic superheat/subcooling; select the correct service tool.
☐ Maintenance & inspection	Before You Start; Crack Open the Cabinet; Revive the Condenser; Spin Up the Blower; Clear the Evaporator	Review airflow restrictions, dirty coils, filter fit, wheel/fan condition, wiring and insulation. Explain why each check matters and how to verify operation.
☐ Drainage & safeties	Beat the Drain Clog Condensate Float Switches	Explain traps, pitch, pans and pumps; float-switch series wiring; shutdown behavior; and testing after service.

LOW PRIORITY | Brief refresh if time allows

Intro to HVAC; HVAC Career Path Intro; Customer Interaction; Customer Soft Skills and Sales; Interview Skills. Also keep career statistics, sales/quoting, discounts/markups, deep equipment taxonomy and repeated cleaning details secondary during final exam preparation.

CHECK WITH YOUR INSTRUCTOR

Review duct installation and reconnection; copper cutting, bending and flaring; recovery/evacuation/charging setups; furnace installation and venting; accessory installation; construction terms; and equipment/airflow noise. These areas need extra attention beyond the two completed programs.

Additional SkillCat options: Electricity Fundamentals (circuits and formulas) and Basic Construction (drawings and framing). These sit outside the two program rosters; ask your instructor which lessons to use.

Heat pump reminder: the coils exchange jobs in heating and cooling. Compressor discharge enters the coil acting as the condenser. Heat pumps can operate below freezing within their equipment-specific limits; use the manufacturer's information.

Before test day: explain the sequence, choose the measurement, interpret the result, and explain your next step. Review missed concepts and practice fresh questions rather than memorizing answer positions.

Prepared for the NATE HVAC Support Technician exam. Priorities are Klein Cooling study guidance. Official scope: [NATE HVAC Support Technician KATE](#).