

Paint and Refinishing YAG

\$127.881 | Two Credits | Double-Blocked | Full Year | 36 Weeks | Recommended Grades 10–12

Course Information: Paint and Refinishing develops advanced knowledge and hands-on skills in automotive surface preparation, spray environments and equipment, respirator/PPE use, refinishing materials, paint mixing and color matching, spray-gun setup, single-stage and basecoat/clearcoat application, blending, plastic refinishing, waterborne and petroleum-based technologies, defect correction, detailing, and quality control. Recommended prerequisite: Basic Collision Repair and Refinishing or Collision Repair. The course integrates §127.15(d)(2) CTE Employability Skills. Safety, health, environmental compliance, technical documentation, measurement, service information, and professional communication are embedded throughout. ACCESS supports career, certification, and postsecondary exploration.

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
1	1–2	Unit 1 – Refinish Shop Safety, Respiratory Protection & Professional Practice	- Identify paint/refinish safety, health and environmental hazards and required controls - Inspect spray environment/equipment for cleanliness, safety and regulatory compliance - Select/use PPE and review air-purifying and supplied-air respirator requirements/procedures - Use service/repair information, technical bulletins, specifications and professional documentation - Explore refinish careers, certifications, workplace expectations and emerging technologies	- PR1(A–D) - PR3(A–H) - PR4(A) §127.15(d)(2)	- ACCESS: refinish careers/postsecondary - Shop safety audit - Respiratory/PPE competency
1	3–4	Unit 2 – Refinish Tools, Equipment, Materials & Vehicle Finish Systems	- Identify/use hand and power tools and refinishing equipment safely - Identify vehicle construction materials and associated refinishing methods - Identify finish types and appropriate refinishing techniques - Compare paint products, decals, adhesives and refinishing systems - Perform precision measurement of paint/materials and document product information	- PR1(C–D) - PR2(A–D) - PR3(F–H) - PR4(B–C)	- Tool/equipment competency - Product technical-data research - Finish identification lab
1	5–7	Unit 3 – Surface Evaluation, Cleaning, Featheredging & Refinish Planning	- Inspect finish type, surface condition and film thickness; document a refinish plan - Clean/prep damaged areas and adjacent surfaces using approved procedures - Featheredge areas to be refinished - Identify metal/plastic substrates and determine preparation/material requirements - Estimate parts/labor/material needs for a refinishing order	- PR1(A–D) - PR2(B–D) - PR4(B–E) - PR5(A–B,M–N)	- Film-thickness/finish inspection - Refinish work order - Surface-prep practical
1	8–9	Unit 4 – Primers, Undercoats, Sealers & Corrosion Protection	- Select/apply suitable metal treatment or primer - Mix primer, primer-surfacer and primer-sealer to product specifications - Select undercoat color/shade to improve topcoat coverage - Apply primer/sealer and stone-chip resistant coating - Discuss corrosion protection and inspect completed substrate preparation	- PR2(B,D) - PR4(E) - PR5(C,E–G,K–L)	- Primer application practical - Undercoat selection activity - Corrosion protection review
2	10–11	Unit 5 – Masking, Dust Control & Final Surface Preparation	- Mask/protect areas that will not be refinished - Remove dust from repaired and adjacent areas, including cracks/moldings - Perform final cleaning and tack-rag procedures - Verify surface readiness and identify contamination risks - Complete quality-control inspection before coating	- PR3(B,E–G) - PR5(D,H–J) - PR4(A)	- Masking practical - Contamination-prevention audit - Pre-paint QC
2	12–13	Unit 6 – Spray Guns, Air Supply & Spray Environment	- Inspect/clean spray guns, hoses, regulators, air lines and air source - Select fluid needle, nozzle and cap for the product - Test/adjust fluid, air and pattern controls - Explain pressure spray equipment operation - Integrate booth/spray-area safety, PPE and environmental controls	- PR3(A–G) - PR6(A–D)	- Spray-gun setup practical - Pattern-test exercise - Equipment maintenance log
2	14–15	Unit 7 – Paint Mixing, Formulas, Reduction & Material Measurement	- Locate manufacturer color codes - Measure, shake, stir, reduce, catalyze/activate and strain refinish materials - Identify/mix paint using formulas and accurate measurement - Compare petroleum and waterborne materials/equipment/preparation - Calculate material quantities/costs and complete refinish paperwork	- PR1(B–D) - PR2(C–D) - PR7(A–B,L,P)	- Mixing-room practical - Material/cost calculation - Waterborne vs. solvent comparison
2	16–17	Unit 8 – Spray Technique & Single-Stage Application	- Demonstrate gun arc, angle, distance, travel speed and pattern overlap - Apply selected product to test/let-down panels and evaluate coverage - Apply single-stage topcoat using approved procedures - Identify poor-hiding colors and determine corrective action - Inspect applied finish and document process quality	- PR2(B) - PR4(C–D) - PR7(C–E,M)	- Single-stage spray practical - Technique analysis - Finish-quality rubric
2	18	Semester 1 Exam – Paint and Refinishing	- Cumulative written/performance assessment covering safety, tools/equipment, surface preparation, primers, masking, spray-gun setup, mixing and single-stage application - Technical documentation/material-measurement component - Semester skills portfolio review	- Cumulative PR1–7 as introduced §127.15(d)(2)	Targeted review/remediation

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
3	19-21	Unit 9 – Color Theory, Color Matching, Test Panels & Tinting	• Use manufacturer labels/formulas to identify color and variants • Prepare/apply test or let-down panels and evaluate color match • Identify alternative formulas and poor-hiding colors • Tint by formula to achieve a blendable match • Document color decisions and material usage	• PR1(A–D) • PR2(D) • PR7(A–D,L–O)	• Color-match lab • Tinting practical • Refinish technician career connection
3	22-24	Unit 10 – Basecoat/Clearcoat Panel Refinishing & Blending	• Apply basecoat/clearcoat for panel refinishing and blending • Remove nibs/imperfections from basecoat as appropriate • Control spray technique, overlap, coverage and blend transitions • Use test panels/color evaluation to verify blendability • Perform process QC and identify causes of visible defects	• PR4(C–D) • PR6(A–D) • PR7(C–D,F,H,M–O)	• Panel blend practical • Color-transition evaluation • Process QC
3	25-27	Unit 11 – Overall Refinishing & Multi-Stage Finishes	• Plan an overall refinish sequence and prepare equipment/materials • Apply basecoat/clearcoat for overall refinishing • Apply multi-stage coats for panel blending and overall refinishing • Manage booth/spray-area safety, contamination and environmental controls • Evaluate finish uniformity, coverage, color and appearance	• PR2(A–B) • PR3(B–H) • PR6(A–D) • PR7(C,G,K,P)	• Overall-refinish simulation/practical • Multi-stage process plan • Industry procedure comparison
4	28-29	Unit 12 – Plastic Refinishing, Decals & Specialty Applications	• Identify rigid, semi-rigid and flexible plastic parts and preparation needs • Refinish rigid/semi-rigid and flexible plastic parts • Apply appropriate decals/transfers/tapes/woodgrains/pinstripes within instructional scope • Select products/adhesion procedures for specialty substrates • Inspect specialty finish quality and document procedures	• PR2(B) • PR4(B–C) • PR5(M) • PR7(I–J) • PR8(A)	• Plastic refinishing practical • Specialty application exercise • Product-system research
4	30-31	Unit 13 – Paint Defects: Diagnosis, Prevention & Correction	• Inspect/identify common paint and refinishing defects and determine likely causes • Relate defects to preparation, contamination, gun setup, mixing or application • Develop corrective/preventive action plans • Sand/buff/polish fresh or existing finish to remove correctable defects • Verify repaired finish against quality standards	• PR4(C–D) • PR8(B,F) • PR3(B,F)	• Defect diagnosis lab • Correction practical • Root-cause analysis
4	32-33	Unit 14 – Final Detailing, Overspray Removal & Quality Control	• Clean vehicle interior, exterior and glass • Clean body openings such as door jambs and edges • Remove overspray using appropriate procedures • Complete final sand/buff/polish as required • Use a final quality-control checklist and professional delivery documentation	• PR4(F) • PR8(B–F) • PR1(A–B)	• Detailing practical • Final QC checklist • Customer-delivery simulation
4	34-35	Unit 15 – Integrated Paint & Refinishing Capstone	• Complete an integrated refinish workflow from inspection/plan through final QC • Prepare surface, mask, prime/seal, mix/match and apply appropriate finish • Demonstrate spray-gun setup and safe/environmentally compliant work practices • Diagnose/correct defects and complete final detailing • Prepare work order/material estimate and present skills/career portfolio	• PR1(A–D) • PR2(A–D) • PR3(A–H) • PR4(A–F) • PR5(A–N) • PR6(A–D) • PR7(A–P) • PR8(A–F) • §127.15(d)(2)	• ACCESS: career transition • Capstone refinish portfolio • Industry/CTSO presentation
4	36	Semester 2 Exam & Refinishing Showcase	• Cumulative written/performance assessment across all Paint and Refinishing TEKS • Color/mixing/application/defect-analysis component • Final skills and career portfolio showcase	• Cumulative PR1–8 • §127.15(d)(2)	• Targeted remediation • Program showcase

Paint and Refinishing TEKS Coverage Checklist

Coverage verification: All 8 Paint and Refinishing knowledge and skills strands and all 62 student expectations in §127.881(d), plus the required §127.15(d)(2) CTE Employability Skills, are intentionally addressed in the 36-week sequence.

Strand	SEs	Knowledge & Skills Focus	YAG Placement	Coverage
PR1	A-D	Communication, technical writing, service/repair information, technical bulletins	Units 1-3, 7, 9, 14-15	100%
PR2	A-D	Refinish procedures by vehicle construction, preparation/application, estimating, precision measurement	Units 2-3, 7-8, 11-12, 15	100%
PR3	A-H	Safety/health hazards, spray environment, respirators, PPE, tools, hazardous materials, emerging technology	Units 1-2, 5-6, 11, 13, 15	100%
PR4	A-F	Safety/environmental audits, construction materials, finish types, defect diagnosis, corrosion protection, detailing	Units 1-4, 8-10, 12-15	100%
PR5	A-N	Surface preparation: inspection/plan, featheredge, treatment/primer, masking, primers/sealers, dust/cleaning, stone-chip coating, plastic/metal prep	Units 3-5, 12, 15	100%
PR6	A-D	Spray gun/equipment inspection, setup, adjustment and pressure equipment operation	Units 6, 10-11, 15	100%
PR7	A-P	Color code, mixing, spray technique, test panels, single-stage, base/clear, blending, overall/multi-stage, plastics, tinting, waterborne/solvent	Units 7-12, 15	100%
PR8	A-F	Decals/specialty applications, sand/buff/polish, cleaning, openings, overspray removal, final QC	Units 12-15	100%
§127.15(d)(2)	Integrated	CTE employability skills required as an integral part of the course	All units	100%

Implementation Notes

- Paint and Refinishing is a two-credit course recommended for Grades 10–12. Recommended prerequisite: Basic Collision Repair and Refinishing or Collision Repair. This YAG assumes a double-blocked full-year schedule.
- Hands-on refinishing work must follow district requirements, manufacturer product data, applicable safety/environmental rules, proper ventilation/spray-environment controls, and required PPE/respiratory protection.
- Surface preparation is intentionally emphasized before advanced color and spray application. Students should demonstrate consistent substrate evaluation, cleaning, featheredging, masking, priming/sealing, dust control, and quality inspection before progressing to complex refinishing.
- Color matching should progress from locating paint codes and mixing formulas to test panels, tinting, alternative formulas, blending, multi-stage finishes, and analysis of petroleum-based versus waterborne technologies.
- ACCESS should support exploration of automotive refinishing, paint technician, collision repair, estimating, paint/material sales, shop management, entrepreneurship, manufacturer training, I-CAR/industry credentials, and postsecondary programs.
- Weeks 18 and 36 are reserved for cumulative semester exams. No instructional unit crosses the semester boundary.