

Auto Collision Repair YAG

Collision Repair | Two Credits | Full Year | 36 Weeks | Recommended Grades 10–12 | §127.880

Course Information: Collision Repair develops knowledge and hands-on skills in vehicle construction, damage analysis, estimating, nonstructural repair, metal finishing and body filling, moveable glass and hardware, plastics and adhesives, welding/cutting, refinishing, corrosion protection, trim, mechanical/electrical component service, detailing, and leak/noise diagnosis. Recommended prerequisite: Basic Collision Repair and Refinishing. The course integrates §127.15(d)(1) CTE Employability Skills. Shop safety, environmental responsibility, service information, technical documentation, measurement, quality control, 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 – Collision Industry, Shop Safety & Professional Practice	• Apply PPE, shop safety, environmental and hazardous-material procedures • Conduct safety/health/environmental shop audits and document findings • Use service information, repair procedures, technical bulletins, specifications and parts resources • Practice repair-order documentation and professional customer/team communication • Explore collision-repair careers, certifications and emerging technologies	• CR1(A–C) • CR3(A,C–D) • CR4(A) • §127.15(d)(1)	• ACCESS: collision careers/postsecondary • Safety audit • Career/certification research
1	3–4	Unit 2 – Vehicle Construction, Materials, Collision Energy & Safety Systems	• Identify body-over-frame/unibody construction concepts and vehicle body components • Compare steel, advanced/high-strength steel, aluminum, plastics and composites • Explain collision-energy management and recognize damage patterns • Identify occupant-restraint/safety systems and repair considerations • Determine appropriate repair methods based on construction/materials	• CR2(A–B) • CR4(B–C,I–J) • CR7(A)	• Vehicle construction identification • Material/repair-method matrix • OEM procedure research
1	5–7	Unit 3 – Tools, Equipment, Disassembly & Component Alignment	• Safely use hand/power tools and collision-repair equipment • Inspect non-damaged components before/during repair • Inspect/remove/replace/align hoods, hinges, latches, bumper covers and related components • Inspect bolted/bonded/welded panels and determine repair/replacement needs • Remove/install/adjust selected mechanical/electrical components using service information	• CR2(B) • CR3(A–B) • CR4(E–F,H,J–L)	• Tool competency demonstrations • Component R&I lab • Service-information task
1	8–9	Unit 4 – Damage Analysis, Measurement & Repair Planning I	• Prepare vehicles for inspection and expose damaged areas • Inspect structural and nonstructural components and identify collision damage • Use measuring tools/equipment to identify structural damage and body/frame misalignment • Identify damage to suspension, electrical, mechanical, safety, interior and accessory systems • Develop an initial repair plan with parts/material/procedure needs	• CR2(E) • CR4(C–E,I–J) • CR8(A–L)	• Damage-analysis practical • Measurement lab • Repair-plan presentation
2	10–12	Unit 5 – Estimating & Repair Planning II	• Record customer/vehicle/VIN/options/paint-code and safety-system information • Apply estimating terminology, sequence and guide/procedure pages • Estimate labor times/rates, replacement parts and non-included operations • Calculate material, shop, environmental, administrative and disposal charges • Compare approximate vehicle value with repair cost and verify estimate accuracy	• CR1(A–D) • CR2(D) • CR4(D) • CR9(A–P)	• Computer/manual estimate • Parts sourcing comparison • ACCESS: estimator careers
2	13–15	Unit 6 – Nonstructural Panel Repair, Metal Finishing & Body Filler	• Remove coatings and identify/repair surface irregularities • Apply hammer-and-dolly techniques and select appropriate metal-finishing methods • Practice heat/cold shrinking concepts using approved procedures/equipment • Prepare/apply body filler; rough/finish sand to correct contour • Compare aluminum repair and filler requirements with steel procedures	• CR4(E,J,P) • CR5(A–I)	• Panel-repair skills practical • Aluminum repair research • Quality-control inspection
2	16–17	Unit 7 – Plastics, Adhesives, Trim, Corrosion Protection & Sealing	• Identify automotive plastics/composites and select repair methods • Clean/prepare and repair rigid, semi-rigid or flexible plastic parts • Evaluate bonded composite panel replacement and support alignment • Discuss interior/exterior trim repair and restore sealers, adhesives, undercoatings, sound deadeners and foam • Diagnose basic water/dust/wind-noise concerns and preserve corrosion protection	• CR4(N–O,R–S) • CR7(A–E) • CR9(O)	• Plastic repair practical • Corrosion-protection documentation • Leak/noise diagnostic exercise
2	18	Semester 1 Exam – Collision Repair	• Cumulative written/performance assessment covering safety, vehicle construction, damage analysis, estimating, nonstructural repair, plastics and corrosion protection • Repair-order/estimate documentation component • Semester skills portfolio review	• Cumulative CR1–9 as introduced • §127.15(d)(1)	• Targeted review/remediation

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
3	19-21	Unit 8 – Moveable Glass, Hardware & Body Sealing Systems	- Inspect/adjust/repair/replace window regulators, run channels, glass, power mechanisms and controls - Inspect/adjust/remove/reinstall weather stripping and sealing systems - Inspect roof-panel options such as sunroofs/convertible mechanisms where equipment permits - Use service information and safe procedures to verify operation/alignment - Document diagnosis and repair decisions	- CR1(A-C) - CR4(F,L,S) - CR6(A-D)	- Window-system lab - Weatherstrip/sealing inspection - Glass technician career connection
3	22-23	Unit 9 – Welding, Cutting & Panel Attachment	- Identify appropriate welding/cutting processes and required safety practices - Demonstrate approved collision-repair welding/cutting processes - Compare bolted, bonded and welded panel attachment methods - Inspect panel fit/alignment and identify repair-versus-replace decisions - Restore corrosion protection after panel operations	- CR3(B-C) - CR4(H,K,O) - CR8(B,F)	- Weld practice/coupon evaluation - Panel attachment comparison - OEM procedure verification
3	24-25	Unit 10 – Refinishing Foundations: Tools, Equipment, Materials & Finish Identification	- Identify vehicle finish types and appropriate refinishing techniques - Use refinishing tools/equipment according to safety/environmental requirements - Identify coatings/materials and interpret product technical information - Prepare work area/vehicle and select appropriate materials for repair - Review hazardous-material handling/disposal and emerging refinishing technology	- CR2(C) - CR3(A,C-D) - CR4(A,G)	- Refinish equipment setup - Product-data-sheet activity - Refinish career connection
3	26-27	Unit 11 – Surface Preparation, Cleaning, Masking & Priming	- Prepare damaged areas using water-based and solvent-based cleaners - Remove coatings/featheredge and correct minor surface irregularities - Finish-sand filler and prepare surfaces for primer/refinish - Apply appropriate masking/protection and corrosion-control practices - Inspect prepared surfaces for quality before coating	- CR2(C) - CR4(G,M,O,P) - CR5(A-B,F-G)	- Surface-prep practical - Primer-ready quality inspection - Defect-prevention analysis
4	28-29	Unit 12 – Paint Mixing, Reducing & Refinish Planning	- Interpret paint codes, product information and manufacturer mixing/reduction requirements - Plan refinishing materials/operations and associated estimate charges - Prepare paint products accurately and safely - Connect finish type, substrate, repair area and product selection - Document material usage and environmental considerations	- CR2(C) - CR3(A,C) - CR4(A,G,M)	- Paint/material calculation - Refinish estimate update - Product-system comparison
4	30-32	Unit 13 – Spray Technique, Basecoat/Clearcoat & Finish Application	- Set up spray equipment and verify safe operation - Demonstrate gun arc, angle, distance, travel speed and pattern overlap - Apply appropriate refinishing products using approved procedures - Evaluate coating coverage, appearance and process quality - Integrate documentation, PPE, environmental controls and cleanup	- CR2(C) - CR3(A,C) - CR4(A,G) - CR5? reinforcement via surface quality	- Spray-technique practical - Refinish quality rubric - SkillsUSA/industry connection
4	33-34	Unit 14 – Finish Defects, Sanding, Buffing, Polishing & Detailing	- Identify common paint/refinishing defects and determine likely causes - Select corrective procedures for defects within instructional scope - Sand/buff/polish repaired or existing finishes as appropriate - Perform vehicle detailing and final appearance inspection - Document quality-control findings and corrective actions	- CR4(M,Q) - CR2(C) - CR1(A-C)	- Defect diagnosis lab - Detailing practical - Final quality-control inspection
4	35	Unit 15 – Integrated Collision Repair Capstone	- Complete an integrated simulated/actual repair workflow from damage analysis through final QC - Prepare repair plan/estimate and verify service information - Demonstrate selected panel, plastic, hardware, refinishing and detailing skills - Audit safety/environmental compliance and document repair decisions - Present completed work order/portfolio and reflect on career readiness	- CR1(A-D) - CR2(A-E) - CR3(A-D) - CR4(A-S) - CR5(A-I) - CR6(A-D) - CR7(A-E) - CR8(A-L) - CR9(A-P) §127.15(d)(1)	- ACCESS: career transition - Capstone repair portfolio - Industry/CTSO presentation
4	36	Semester 2 Exam & Collision Repair Showcase	- Cumulative written/performance assessment across all Collision Repair TEKS - Damage-analysis/estimating and repair-quality component - Final skills/career portfolio showcase	- Cumulative CR1-9 §127.15(d)(1)	- Targeted remediation - Program showcase

Auto Collision Repair TEKS Coverage Checklist

Coverage verification: All 9 Collision Repair knowledge and skills strands and all 78 student expectations in §127.880(d), plus the required §127.15(d)(1) CTE Employability Skills, are intentionally addressed in the 36-week sequence.

Strand	SEs	Knowledge & Skills Focus	YAG Placement	Coverage
CR1	A–D	Communication, technical writing, service information, estimating mathematics	Units 1, 5, 8, 12, 14–15	100%
CR2	A–E	Repair procedures, inspections, refinishing, estimating, precision measurement	Units 2–5, 10–15	100%
CR3	A–D	Tools/equipment, welding/cutting, hazardous materials, emerging technology	Units 1, 3, 9–13, 15	100%
CR4	A–S	Applied collision repair/refinish: compliance, materials, damage, panels, finishes, restraints, welding, systems, defects, trim, corrosion, cleaning, detailing, foam, leaks/noise	Units 1–15	100%
CR5	A–I	Metal finishing/body filling, shrinking, sanding, steel/aluminum repair	Units 6, 11, 15	100%
CR6	A–D	Moveable glass, window systems, sealing, roof/convertible mechanisms	Unit 8; capstone	100%
CR7	A–E	Plastics/composites, preparation/repair, bonded panel replacement	Units 2, 7, 15	100%
CR8	A–L	Damage analysis: structural/nonstructural, measurements, systems, finish, accessories, one-time-use parts	Units 4, 9, 15	100%
CR9	A–P	Estimating: customer/VIN/options, terminology/sequence, labor, parts, fees/materials, estimate verification, corrosion protection, vehicle value	Units 5, 7, 12, 15	100%
§127.15(d)(1)	Integrated	CTE employability skills required as an integral part of the course	All units	100%

Implementation Notes

- Collision Repair is a two-credit course recommended for Grades 10–12, with Basic Collision Repair and Refinishing listed as the recommended prerequisite.
- Hands-on work should be performed only with appropriate PPE, ventilation, environmental controls, equipment safeguards, manufacturer/OEM procedures, and district-approved shop practices. Safety and environmental compliance are continuous expectations rather than stand-alone topics.
- Damage analysis and estimating should use authentic service information and estimating resources where available. Students should practice both technical repair documentation and customer/team communication.
- Refinishing instruction should progress from surface preparation and material selection to mixing, spray technique, defect analysis, correction, and final detailing. Product technical data and manufacturer procedures should govern material handling and application.
- ACCESS should support exploration of collision repair, estimating, refinishing, welding, automotive glass, parts, insurance/appraisal, shop management, entrepreneurship, certifications, and postsecondary programs.
- Weeks 18 and 36 are reserved for cumulative semester exams. No instructional unit crosses the semester boundary.