

Practicum in Automotive Technology YAG

§127.921 Practicum in Transportation Systems | Two Credits | Full Year | 36 Weeks | Grades 12 | Automotive Capstone

Course Information: Practicum in Transportation Systems is a paid or unpaid capstone experience that provides supervised practical application of previously developed transportation knowledge and skills in school-lab or work-based settings. This automotive-focused YAG is designed as the culminating course after Automotive Technology I and Automotive Technology II. Students integrate preventative maintenance, vehicle systems, service information, repair-order documentation, precision measurement, electrical/electronic diagnosis, steering/suspension, brakes, engine performance, engine mechanical service, HVAC, structured diagnosis, quality control, customer communication, and professional work habits through increasingly independent automotive service experiences. §127.15(d)(2) CTE Employability Skills are integrated throughout.

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
1	1-2	Unit 1 - Practicum Launch, Safety, Professional Standards & Skills Baseline	- Establish practicum/shop policies, PPE, safety and environmental expectations - Demonstrate punctuality, initiative, cooperation, ethical decision making and quality standards - Complete baseline evaluation of Automotive Technology I/II technical proficiencies - Set individualized technical/career goals based on strengths and growth areas - Launch professional portfolio and practicum work/service log	- PTS1 (A-G) - PTS5 (A-C) - PTS6 (A) §127.15(d)(2)	- ACCESS: automotive career/credential planning - Technical skills baseline - Professional goal plan
1	3-5	Unit 2 - Capstone Service Workflow: Customer Concern to Repair Plan	- Receive and clarify customer/simulated concerns using professional communication - Research service history, specifications, TSBs, diagrams and technical resources - Analyze symptoms and compare diagnostic alternatives - Develop service/diagnostic plans and parts/labor estimates - Complete repair-order documentation using technical vocabulary	- PTS1 (A-G) - PTS2 (A-D) - PTS4 (A-G) - PTS5 (A-C)	- Repair-order case study - Service-information research - Diagnostic plan review
1	6-9	Unit 3 - Preventative Maintenance & Comprehensive Vehicle Inspection	- Perform comprehensive preventative-maintenance and multipoint inspections - Integrate fluids, cooling/lubrication, belts/hoses, tires, chassis and safety checks - Use manufacturer service schedules and technical resources - Identify concerns, prioritize recommendations and communicate findings - Evaluate technical proficiency and respond to supervisor feedback	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (B,D-G) - PTS4 (A-G) - PTS5 (A-C)	- Multipoint inspection - Customer recommendation presentation - Portfolio work samples
2	10-12	Unit 4 - Chassis Capstone: Steering, Suspension, Tires & Brakes	- Diagnose/service assigned steering, suspension, wheel/tire and brake concerns - Use precision measurement and diagnostic/service equipment - Research specifications and compare repair alternatives - Work independently and in teams while maintaining safe/quality practices - Document root cause, corrective action and quality-control results	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (A-J) - PTS4 (A-G) - PTS5 (A-C)	- Chassis diagnostic work order - Team service rotation - Supervisor evaluation
2	13-15	Unit 5 - Electrical/Electronic Systems Capstone	- Diagnose circuit faults using wiring diagrams, meters and structured testing - Apply battery, starting, charging and vehicle-electronics knowledge - Analyze scan/diagnostic information and determine relevance to the concern - Perform approved repairs/service and verify operation - Explain diagnostic evidence and repair decisions to instructor/supervisor/customer	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (A-J) - PTS4 (A-G) - PTS5 (A-C)	- Electrical diagnostic case - Wiring/charging service - Technical explanation
2	16-17	Unit 6 - Semester 1 Integrated Service Capstone	- Complete an assigned vehicle service/diagnostic project from intake through closeout - Integrate preventative maintenance, chassis and electrical skills - Demonstrate leadership/teamwork, time management and problem solving - Accept/apply critical feedback and verify quality of completed work - Update portfolio with repair orders, work samples and supervisor evaluation	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (A-J) - PTS4 (A-G) - PTS5 (A-C) - PTS6 (A-B)	- Integrated vehicle service capstone - Quality-control audit - Portfolio review
2	18	Semester 1 Exam - Automotive Capstone	- Cumulative written/application assessment covering professional standards, problem solving, communication and Semester 1 automotive service integration - Integrated service/diagnostic performance assessment - Semester portfolio and supervisor-feedback review	- Cumulative PTS1-6 §127.15(d)(2)	Targeted review/remediation
3	19-21	Unit 7 - Engine Performance Capstone: OBD II & Diagnostic Strategy	- Diagnose engine-performance concerns using OBD II data and service information - Retrieve/analyze DTCs, freeze-frame data, monitor status and related test results - Compare possible causes and select efficient diagnostic steps - Verify repairs/decisions using appropriate evidence - Document findings and communicate technical conclusions	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (A-J) - PTS4 (A-G) - PTS5 (A-C)	- Scan-tool diagnostic case - Diagnostic decision tree - Repair verification
3	22-24	Unit 8 - Engine Mechanical & Cooling-System Capstone	- Diagnose mechanical/cooling concerns using measurement and service procedures - Apply compression, leakage, timing and cooling-system concepts as appropriate - Research technical information and evaluate repair alternatives - Perform approved service/repair with quality-control verification - Evaluate personal technical proficiency and apply supervisor feedback	- PTS1 (A-G) - PTS2 (A-D) - PTS3 (A-J) - PTS4 (A-G) - PTS5 (A-C)	- Engine mechanical work order - Cooling-system diagnosis - Skills evaluation

GP	Wks	Unit & Focus	Major Learning Tasks & Assessments	Integrated TEKS	Extension Activities
3	25–27	Unit 9 - HVAC, Emerging Vehicle Systems & Cross-System Diagnosis	• Diagnose/service assigned HVAC concerns within available equipment/certification limits • Apply safety precautions for hybrid/electric or emerging vehicle systems when encountered • Analyze concerns that involve multiple interacting vehicle systems • Use technical resources to compare diagnostic/repair options • Present evidence-based recommendations using professional communication	• PTS1(A–G) • PTS2(A–D) • PTS3(A–J) • PTS4(A–G) • PTS5(A–C)	• HVAC diagnostic scenario • Emerging-systems safety study • Cross-system case
4	28–30	Unit 10 - Independent Automotive Service Rotation	• Manage increasingly independent service work from customer concern through verification • Prioritize workload, time, tools, parts and technical resources • Demonstrate leadership and effective working relationships in shop teams • Resolve problems and adapt plans when new diagnostic evidence emerges • Maintain professional work/service records and portfolio evidence	• PTS1(A–G) • PTS2(A–D) • PTS3(A–J) • PTS4(A–G) • PTS5(A–C) • PTS6(A)	• Independent service rotation • Shop leadership role • Supervisor feedback
4	31–33	Unit 11 - Comprehensive Automotive Capstone Project	• Complete a complex automotive diagnosis/service project integrating prior-course competencies • Use structured problem solving, technical research and multiple diagnostic methods • Demonstrate safe, ethical, efficient and quality-focused service practices • Collaborate when appropriate and communicate with stakeholders throughout the project • Complete final repair documentation, verification and reflective technical abstract	• PTS1(A–G) • PTS2(A–D) • PTS3(A–J) • PTS4(A–G) • PTS5(A–C) • PTS6(A)	• Comprehensive capstone work order • Technical abstract • Quality-control review
4	34–35	Unit 12 - Professional Portfolio, Career Transition & Stakeholder Presentation	• Finalize portfolio with technical competencies, certifications/recognitions, résumé and work samples • Include practicum abstract and supervisor evaluation • Evaluate progress toward automotive career goals and identify next-step training/certifications • Practice interviewing and professional communication • Present portfolio and capstone evidence to interested stakeholders	• PTS1(A–G) • PTS3(A–J) • PTS4(A–G) • PTS5(A–C) • PTS6(A–B) • §127.15(d)(2)	• ACCESS: résumé/job/postsecondary planning • Mock interview • Stakeholder portfolio presentation
4	36	Semester 2 Exam & Automotive Capstone Showcase	• Cumulative assessment across all Practicum in Transportation Systems TEKS • Integrated automotive diagnosis/service performance component • Final portfolio, supervisor evaluation and capstone showcase	• Cumulative PTS1–6 • §127.15(d)(2)	• Targeted remediation • Automotive capstone showcase

Practicum in Transportation Systems TEKS Coverage Checklist - Automotive Capstone

Coverage verification: All six current Practicum in Transportation Systems knowledge and skills strands and all 33 student expectations in §127.921(d), plus §127.15(d)(2) CTE Employability Skills, are intentionally addressed. Automotive Technology I and Automotive Technology II competencies provide the technical context for the practicum's required professional standards, problem solving, leadership/teamwork, communication, advanced technical growth, feedback, and portfolio documentation.

Strand	SEs	Knowledge & Skills Focus	YAG Placement	Coverage
PTS1	A–G	Professional standards: policies/procedures, work attitudes, criticism, ethics, quality, professional appearance/PPE, safety	All units	100%
PTS2	A–D	Critical thinking/problem solving: analyze problems, determine relevant information, compare alternatives, conduct technical research	Units 2–11	100%
PTS3	A–J	Leadership/teamwork: leadership, cooperation, team processes, responsibility, working relationships, interpersonal skills, negotiation, respect and diversity	Units 1, 3–12	100%
PTS4	A–G	Technical communication: vocabulary, verbal communication, technical resources, source reliability, verbal/nonverbal cues, active listening, written/oral academic skills	All units	100%
PTS5	A–C	Advanced transportation technical skills: develop advanced skills tied to career goals, evaluate proficiency, accept supervisor feedback	All technical/service units	100%
PTS6	A–B	Professional portfolio: competencies/certifications, extended learning, practicum abstract, résumé, work samples, supervisor evaluation, stakeholder presentation	Units 1, 3, 6, 10–12	100%
§127.15(d)(2)	Integrated	Required Level 3/4 CTE employability skills	All units	100%

Implementation Notes

- This course functions as the capstone for Automotive Technology I: Maintenance and Light Repair and Automotive Technology II: Automotive Service. New content should be limited when possible; the primary emphasis is integration, increasing independence, diagnostic reasoning, quality service, and demonstrated mastery of prior automotive competencies.
- Practicum experiences may be school-lab based or work based. The same TEKS can be demonstrated through authentic school-shop work orders, internships, mentorships, supervised industry experiences, or a combination of settings.
- Technical rotations intentionally revisit preventative maintenance, chassis, brakes, electrical/electronics, engine performance, engine mechanical/cooling, HVAC and integrated diagnosis so students apply prior-course learning to increasingly complex customer/vehicle concerns.
- Repair orders, service information, technical research, supervisor feedback, quality-control verification and professional communication should accompany authentic service work throughout the year.
- The professional portfolio should be developed continuously and include technical competencies, applicable certifications/recognitions, extended learning, practicum abstract, résumé, work samples and supervisor evaluation, culminating in a stakeholder presentation.
- ACCESS should support certification/postsecondary planning, résumé/interview preparation, apprenticeship or employment searches, and transition from the automotive program into the workforce or further education.
- Weeks 18 and 36 are reserved for cumulative semester exams. No instructional unit crosses the semester boundary.