

MILESTONE PLANNING AND RESEARCH, INC.

AI Innovation With Trust: A Program Path To Competency And Business Results

Program Prospectus for Employers, Colleges/Universities, Certification Providers,
and AI Practitioners

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Executive Summary

The AI Innovation With Trust: A Program Path To Competency and Business Results addresses a specific failure that pervades current AI workforce development: programs teach AI skills without producing the evidence that employers need to trust the AI deliverables produced by practitioners on consequential work.

The problem is not a shortage of AI knowledge. It is a shortage of verifiable, attested, observable competency — the kind of evidence that tells an employer, a regulator, or an audit committee: the deliverables produced are trustworthy and that this practitioner’s judgment has been observed, tested, and found trustworthy.

Organizations that have adopted AI tools at scale are discovering that the limiting constraint is not AI capability — it is the human capacity to identify high-value transformation opportunities, design AI-enabled processes that create revenue or reduce cost, build defensible business cases, and measure real outcomes against real baselines with confidence.

Based upon the foundational principles of apprenticeship this program builds that capacity directly. It is organized around five occupational pathways, the newest of which — the Artificial Intelligence Business Process Architect — is explicitly designed to close the gap that training frameworks and most academic AI programs have left open: the map from AI skill to process innovation and business outcome.

Every competency in the program is anchored to the Know→Do→Become architecture: what the practitioner understands, what they demonstrably produce, and what professional judgment they exercise in real work contexts. Advancement is evidence-based, not time-based. The credential reflects demonstrated performance — not course completion.

The Workforce Problem This Program Solves

AI adoption in organizations is accelerating, but the workforce capable of deploying AI responsibly is not keeping pace. Three failure modes are converging:

- Organizations deploy AI tools without governance, validation, or accountability structures. The concept of “governance” remains vague. Outputs are trusted because they are fluent — not because they have been verified. This is the central trust failure of the current AI era: fluency is mistaken for trustworthiness. Risk accumulates silently until a consequential failure makes the absence of trust architecture visible.
- Educational programs produce graduates with conceptual AI knowledge but no work experience. Entry-level AI roles increasingly require demonstrated project performance, which new graduates cannot yet show.
- The AI workforce development market is largely short technical programs that teach tool use. Many of these programs do not teach AI governance in a specific contextual sense, falsification testing, validation engineering, or the human judgment skills that prevent AI failures.

This program exists to address all three problems simultaneously: it provides employers with governed talent development and verifiable practitioner trust; colleges, universities and certification providers with a credible workforce bridge; and workers with a paid pathway to demonstrated AI competency that carries independent attestation. In a market with an expanding number of AI credentials, the qualification card is the trust signal that cuts through the noise. And because trust is mathematically proportionate to the inverse of residual risk, every verified practitioner trustworthiness unit the program produces translates directly into reduced AI deployment risk for the sponsoring organization.

Why the Apprenticeship Model — and Why Now

The apprenticeship model is uniquely suited to AI practitioner development because AI competency cannot be fully assessed in a classroom. Knowing how a large language model hallucinates is different from detecting hallucination in a production deliverable under delivery pressure. Understanding governance concepts is different from maintaining a governance posture when the project sponsor wants to move faster. Falsification principles are different from running a contradiction audit on a live model output.

The Know→Do→Become architecture operationalizes this distinction. Know is developed through related technical instruction — equivalent to the classroom and can be tied to a relevant certification. Do is demonstrated through supervised on-the-job learning with real deliverables — equivalent to the trade. Become is attested by mentor/coaches who directly observe professional behavior in context — equivalent to the judgment and craft standards of the traditional journey worker relationship.

The timing is significant. NIST published AI RMF 1.0 in 2023, establishing a voluntary but increasingly adopted governance framework for AI systems. Regulatory attention to AI risk management is growing in

financial services, healthcare, government contracting, and infrastructure. Organizations that build internal AI governance capability now — rather than importing it reactively under compliance pressure — will hold a durable advantage. This program builds that internal capability one verified practitioner at a time.

Occupational Pathways

The program covers five occupational pathways:

Occupation	Primary Focus	DOL Code (Proposed)
Artificial Intelligence Analyst	AI-assisted analysis, decision support, source verification, workflow improvement, business value measurement.	15-2099 (proposed new)
Artificial Intelligence Operations and Governance Specialist	NIST AI RMF operationalization, AI controls, model risk, audit, escalation, governance charter design.	13-1199 (proposed new)
Artificial Intelligence Quality and Validation Specialist	Test design, benchmark construction, falsification engineering, IV&V, explainability assessment, assurance reporting.	17-2199 (proposed new)
Artificial Intelligence Developer	Designs, builds, and deploys AI systems that are reproducible, auditable, and governed from the point of development. Applies probabilistic reasoning, human-in-the-loop design, and validation discipline to production AI work.	15-1252 (proposed new)
Artificial Intelligence Business Process Architect	Maps current-state processes to AI transformation opportunities. Designs AI-enabled future-state processes with measurable revenue or cost impact. Uses AI to build AI-enabled solutions. Owns the business case from discovery through value realization.	13-1199 / 15-2099 (proposed new)

Benefits to Employers

The program delivers measurable employer value across five dimensions:

- Systemic AI project governance, AI compliance readiness, and risk management. The program develops AI governance, validation, human oversight, and risk management competencies aligned with NIST AI RMF. Occupation B — the AI Operations and Governance Specialist — is the primary risk occupation: practitioners maintain AI risk registers, manage governance lifecycle risk, and own project risk management for governance programs, producing the Trust \propto 1/Risk double win. Organizations in regulated industries build compliance-ready AI practice as a natural outcome.
- Reduced AI System Deployment risk. Trust is proportionate to the inverse of residual risk — Trust \propto 1/Risk — so every verified practitioner trustworthiness increment the program produces translates directly into reduced deployment risk. Practitioners develop AI competency under observation, producing an evidence-based record of what each worker can reliably do before they operate independently on production systems.
- Earn-and-learn talent pipeline. Practitioners produce real deliverables during the program. The employer is not buying training in the abstract; it is investing in workforce capability while getting work done.
- Improved retention. The program creates a structured development relationship. Workers who develop under qualified mentors and receive recognized credentials have higher retention rates than workers who receive only general benefits.
- Succession and internal capability. The program builds competency at the analyst, governance, validation, developer, and business process architect levels simultaneously, creating a complete internal AI capability rather than a single specialist function.

Benefits to Colleges, Universities and Certification Providers

Academic institutions gain a structured, credit-compatible work-based learning model that strengthens placement outcomes, employer relationships, and program relevance in a fast-moving field.

- **Related Technical Instruction alignment.** The Know dimension of every competency maps directly to academic coursework. Colleges can design RTI modules from existing AI, data science, statistics, and business courses, supplemented by new content in governance, validation, and human judgment.
- **Capstone and internship integration.** The Do dimension of every competency maps to capstone projects, internships, and co-ops. The program provides a formal credential structure for work-based learning that colleges already offer.
- **Stackable credentials.** Program completion at L1 through L4 produces verifiable competency records that can be aligned with certificate programs, associate degrees, bachelor’s degree capstone requirements, and continuing professional education.
- **Employer access and research partnerships.** Participating employers become active educational partners rather than passive recruiters. Faculty gain access to real AI governance and validation challenges as research and curriculum development material.

Benefits to Practitioners

The program is designed for three populations simultaneously: new graduates entering the workforce, incumbent workers moving into AI-enabled roles, and professionals seeking to formalize AI governance or validation expertise.

- **Portfolio of verified deliverables.** Practitioners produce real work products reviewed by mentor/coaches and journey workers. The portfolio replaces the “no experience” problem for new entrants.
- **Structured mentorship.** Every practitioner is paired with a qualified mentor/coach. The relationship is structured around direct behavioral observation, not merely task completion. This also ensures the human is always “in the loop”.
- **Recognized occupational credential.** Completion produces credential that travels with the worker and is recognized by participating employers and academic institutions.
- **Career architecture.** The five occupations provide a visible career pathway from AI Associate through AI Professional with clear advancement gates and evidence requirements at each level.
- **Paid learning.** New practitioners earn wages from the first day. The financial barrier to AI professional development is eliminated.

Common Trunk Competencies

All five occupations share a Common Trunk that establishes the foundational professional standards of the program. These fourteen competency areas are required at all occupational levels. T-2.1 through T-2.9 are assessed across Know, Do, and Become. T-2.10 through T-2.14 are assessed at Know level only — these address the organizational governance context in which all AI work occurs, and are organizational responsibilities; the practitioner’s role is awareness, navigation, and escalation before occupation-specific competencies are assessed:

ID	Common Trunk Competency	RTI Hours	Why It Comes First
T-2.1	Inductive Systems Literacy	24	Prevents treating fluent AI output as accurate output — the root cause of most AI adoption failures.
T-2.2	Business Value Creation	24	Grounds AI use in measurable outcomes rather than capability novelty.
T-2.3	Signal Quality and Data	24	Establishes that data readiness is a governance condition, not an assumption.
T-2.4	Human Authority and Accountability	24	Names the human who decides for every consequential AI-enabled process.
T-2.5	Falsification and Vigilance	24	Builds the professional habit of seeking disconfirmation before acting on AI outputs.
T-2.6	Problem-Finding Mindset	24	Preserves the irreducibly human capacity to identify the question that isn't being asked.
T-2.7	AI Security Awareness	24	Establishes AI-specific security awareness as a practitioner responsibility — prompt injection, adversarial inputs, data poisoning, and exploitation of AI integrations are threats every practitioner must recognize and escalate.

ID	Common Trunk Competency	RTI Hours	Why It Comes First
T-2.8	AI-Enabled Innovation Judgment	28	Develops the capacity to distinguish genuine AI transformation opportunities from AI adoption, and requires at least one documented mentor-practitioner thinking partnership directed at a novel AI application traceable to a real organizational context.
T-2.9	AI-Assisted Decision Quality	24	Closes the gap between AI output accuracy and AI-assisted decision quality — requiring practitioners to assess domain alignment, decision mode appropriateness, and independence of judgment before any AI output informs a consequential decision.
T-2.10	AI Risk Governance and Framework Integration [Know only]	8	Grounds every practitioner in the major AI risk governance frameworks (NIST AI RMF, ISO 42001, EU AI Act) and their organizational role within them.
T-2.11	AI Organizational Processes and Alignment [Know only]	8	Ensures practitioners can identify and escalate AI deployment alignment failures before they reach production.
T-2.12	AI Ownership, Oversight, and Accountability [Know only]	8	Establishes who owns every AI system the practitioner works with and what the escalation path is when it behaves unexpectedly.
T-2.13	AI Policies, Procedures, and Organizational Training [Know only]	6	Confirms the practitioner has read and can act on the organization’s AI policies relevant to their occupation.
T-2.14	AI Regulatory Compliance and Legal Considerations [Know only]	8	Gives every practitioner sufficient regulatory literacy to recognize when a deployment raises a compliance question and to escalate it before proceeding.

NIST AI RMF Alignment

Every competency in the program is mapped to the NIST AI Risk Management Framework (AI RMF 1.0) core functions: GOVERN, MAP, MEASURE, and MANAGE. This mapping serves three purposes: it grounds the competency architecture in a recognized federal standard, it simplifies compliance documentation for regulated-industry employers, and it positions program graduates as immediately relevant to AI governance programs in any organization using the NIST AI RMF.

The GOVERN function is addressed primarily through the Trunk (T-2.4, T-2.5, T-2.7, T-2.8, T-2.9), the Ops and Governance occupation (B-B3, C-C2, C-C3, F-F1, F-F2), and the Developer occupation (D-D5, D-D7). MAP is addressed through the Analyst occupation (A-A1 through A-A4, E-E1, E-E2) and the Developer occupation (D-D1 through D-D3). MEASURE is addressed through the Quality and Validation occupation (V-V1 through V-V7) and the Governance occupation (C-C1 through C-C3). MANAGE is addressed through the Trunk (T-2.2, T-2.3), Governance (F-F1, F-F2), and cross-cutting attestation and qualification card requirements.

Formal Apprenticeship Alignment (29 CFR Part 29) Without an Administrative Burden

The program is designed to meet the key requirements of 29 CFR Part 29 — the federal regulations governing competency development programs. Key alignment points are as follows:

29 CFR Part 29 Requirement	Program Alignment
Competency-based progression	Every competency has an explicit Know, Do, and Become standard with defined evidence. Advancement gates require demonstrated attainment, not seat time alone.
Related Technical Instruction	The Know dimension of every competency specifies RTI hours and content. RTI is delivered by colleges, online providers, or employer instructors aligned with competency standards.
Supervised On-the-Job Learning	The Do dimension of every competency requires direct mentor observation of performance on real work. Unreviewed AI-generated work products do not qualify.

29 CFR Part 29 Requirement	Program Alignment
Competency Records and Progress Documentation	Qualification cards provide the per-competency evidence record. Know, Do, and Become each require separate signoff. Become requires specific behavioral attestation — not generic praise.
Interim Credentials	L1 through L4 qualification card completion produces interim credentials aligned with the occupational progression from AI Associate to AI Specialist.
Mentor/Coach Signoff	All L3 and above competencies require journey worker signoff.

Occupational Progression

Level	Title	Competencies Required	Advancement Gate
L1	AI Associate	T-2.1, T-2.2 (all dims) + occupation entry competency + T-2.10 through T-2.14 (Know only)	Mentor signoff on all L1 competencies. L1 qualification card complete.
L2	AI Analyst	All L1 + T-2.3, occupation L2 competencies	Mentor signoff + verified portfolio deliverable with quality documentation.
L3	AI Practitioner	All L2 + T-2.4, T-2.5, T-2.9, occupation L3 competencies	Mentor/coach or Journey worker signoff. Portfolio contains governance plan or validation plan with evidence.
L4	AI Specialist	All L3 + T-2.6, T-2.7, T-2.8, occupation L4 competencies	Mentor/coach or Journey worker signoff. Portfolio reviewed by program sponsor.
Journey worker	AI Professional	Full occupation competency set	Sponsor and journey worker panel review. Portfolio accepted. Certificate issued.

Partnership Model

The program operates through three-way partnerships between, employers (work sites, mentors, and project access), and academic institutions (related technical instruction and student pipelines), and certification providers.

Employers provide paid work, named mentors and journey workers, access to real projects and appropriate data, and business outcome context. Colleges, universities and certification providers deliver related technical instruction, faculty support, academic credit alignment, and access to student cohorts.

The program is strongest when the same project supports employer business value, academic capstone or internship requirements, and program evidence collection simultaneously. This three-way alignment is achievable in most AI project contexts and represents the program’s core operational model.

Strategic Positioning

This program is not primarily teaching people how to use AI tools. Many technical programs already do that. This program teaches people how to use AI responsibly build, test, deploy, govern AI rigorously, validate AI outputs independently, and build AI-enabled systems with auditability and human authority built in from the first design decision.

That is a substantially different — and more durable — workforce proposition. As AI tool capability increases and the cost of code generation approaches zero, the critical bottleneck shifts to validation, governance, accountability, and organizational judgment. The practitioners who develop those competencies now will be the AI workforce the next decade actually needs.

For employer inquiries, partnership discussions, or registration information, contact:

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