RA-AI | RISK ANALYTICS AI
RAAI ACADEMY

REGISTRATION OPEN

# Practical AI Education for Risk, Safety, Health, Ergonomics, and Human Factors Professionals

## Build the computational judgment, data fluency, and governance capability to apply AI responsibly where decisions matter most.

Five applied courses. Three learning levels. Eight stackable certificate pathways. AI-driven, AI-enabled, human-centered, and assurance-led education for high-consequence work systems.

| 5 | 76 | 7.6 | 2027 |
|---|---|---|---|
| APPLIED COURSES | TOTAL HOURS | TOTAL CEUs | PUBLIC OFFERINGS |

Explore the Academy

**Applied Intelligence for Safer, More Resilient Systems**

2027 PROGRAM GUIDE

WHY RAAI ACADEMY

# Beyond generic prompt engineering

Applied AI capability for professionals whose decisions affect people, operations, and organizational risk - built on computational, data-intensive, and assurance-led methods.

THE RAAI DUAL-LENS LEARNING MODEL

LENS 1

## AI for Risk, Safety, Health, Ergonomics & Human Factors

**Apply AI to strengthen:**

- AI-driven hazard discovery and computational risk intelligence
- AI-enabled system safety, SIF pathways, and critical-control assurance
- Predictive safety analytics, anomaly detection, and incident learning
- Occupational health, ergonomics, human factors, and performance intelligence

LENS 2

## Risk, Safety, Health, Ergonomics & Human Factors of AI

**Identify and control risks from:**

- AI-enabled decisions, automation, and algorithmic management
- Robotics, computer vision, intelligent sensors, and wearables
- Model bias, drift, uncertainty, privacy, cybersecurity, and misuse
- Automation bias, degraded human oversight, and loss of operational control

**Use AI responsibly. Keep people accountable. Build safer, more resilient AI-enabled work systems.**

**Computational • Data-intensive • Evidence-grounded • Human-accountable**

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LEARNING ARCHITECTURE

# From responsible AI foundations to human-centered deployment assurance

Five courses across three levels, connecting AI literacy, computational risk intelligence, predictive analytics, human factors and ergonomics, and lifecycle assurance through eight stackable certificate pathways.

| | | |
|---|---|---|
| 01 | LEVEL I<br>**AI FOUNDATIONS & RESPONSIBLE USE** | AI100 |
| 02 | LEVEL II<br>**AI-ENABLED RISK INTELLIGENCE, ANALYTICS & HUMAN-CENTERED AI** | AI200 + AI201 + AI202 |
| 03 | LEVEL III<br>**AI GOVERNANCE, DEPLOYMENT & SAFETY ASSURANCE** | AI300 |

## EIGHT CERTIFICATE PATHWAYS

| | | |
|---|---|---|
| 01 | AI Literacy and Competency | AI100 |
| 02 | Applied AI for Safety and Risk Management | AI100 + AI200 or AI201 |
| 03 | Advanced AI-Enabled Safety and Risk Analytics | AI100 + AI200 + AI201 |
| 04 | AI Governance and Safety Assurance | AI300 |
| 05 | Professional Certificate in AI Safety, Risk, and Governance | AI100 + (AI200 or AI201) + AI300 |
| 06 | Applied Certificate in AI for Human Factors and Ergonomics | AI100 + AI202 |
| 07 | Advanced Certificate in Human Factors, Ergonomics, and Risk Management | AI100 + AI202 + (AI200 or AI201) |
| 08 | Professional Certificate in Human Factors, Ergonomics, and AI Assurance | AI100 + AI202 + AI300 |

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RAAI-AI100

# AI Literacy and Competency for Safety, Health, Risk, and Ergonomics Professionals

## Practical AI Use, Workplace Risk Assessment, and Evidence-Based Decision-Making

## Build AI fluency for evidence-based, human-accountable decisions.

### FIVE PRACTICAL OUTCOMES

- Evaluate whether AI use is appropriate for a task, tool, data set, and decision context.
- Assess how AI-enabled systems may introduce or modify safety, health, ergonomic, privacy, security, and equity risks.
- Evaluate AI data, model performance, uncertainty, bias, failure modes, and validation evidence.
- Design secure, bounded, and verifiable AI-assisted workflows with effective human oversight and professional controls.
- Operationalize responsible AI use through impact assessment, monitoring, change management, stop-use criteria, and defensible decision-making.

### COURSE DETAILS

DATE

**March 17, 2027**

TIME

**8:00 AM-4:30 PM MST (UTC-7)**

FORMAT

**Live online via Zoom Workplace**

CREDIT

**0.8 CEUs**

EARLY BIRD **$595**

through February 15, 2027

### PRACTICAL MATERIALS

- Digital participant guide
- AI use-case impact and control assessment tools
- Prompting, output-evaluation, and evidence-verification job aids
- Controlled workflow and monitoring templates
- Applied cases and Certificate of Completion

Register Now

**Instructors: Sam Zarei, Ph.D., CSP, FRAeS | Kamran Gholamizadeh, MSc.**

CEUs and the Certificate of Completion require satisfaction of the published attendance, participation, and completion requirements.

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RAAI-AI200

# AI-Enabled Hazard and Risk Management

## SIF Prevention, Risk Intelligence, and Critical Control Assurance

## Convert complex EHS data into defensible risk intelligence.

### FIVE PRACTICAL OUTCOMES

- Build AI-ready work-system and operational data structures for hazard identification and risk intelligence.
- Apply AI-enabled hazard identification and SIF risk analysis to distinguish evidence, assumptions, routine risk, and high-consequence exposure.
- Model accident pathways and critical-control dependencies using AI-assisted Bow-Tie, STPA, and systems-based risk analysis.
- Design and prioritize AI-enabled risk interventions and critical-control assurance strategies using multi-criteria, uncertainty, and barrier-performance analysis.
- Validate and operationalize AI-generated risk intelligence through evidence traceability, hallucination checks, assurance records, and integration into EHS and operational decision systems.

### COURSE DETAILS

DATE

**May 12-13, 2027**

TIME

**8:00 AM-4:30 PM MST (UTC-7), each day**

FORMAT

**Live online via Zoom Workplace**

CREDIT

**1.6 CEUs**

EARLY BIRD **$1,095**

through April 12, 2027

Register Now

### PRACTICAL MATERIALS

- Work-system and JSA/JHA analysis templates
- AI-driven hazard and evidence-review tools
- Quantitative risk, sensitivity, and intervention worksheets
- Bow-Tie, STPA, and critical-control assurance templates
- Decision-ready outputs and Certificate of Completion

**Instructors: Sam Zarei, Ph.D., CSP, FRAeS | Kamran Gholamizadeh, MSc.**

CEUs and the Certificate of Completion require satisfaction of the published attendance, participation, and completion requirements.

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RAAI-AI201

# AI-Enabled Predictive Safety and Risk Analytics

## Leading Indicators, Causal Analysis, and Organizational Learning

## Build predictive risk intelligence for prevention - not another lagging dashboard.

### FIVE PRACTICAL OUTCOMES

- Build trustworthy, AI-ready data pipelines for safety and risk analytics.
- Design AI-enabled leading-indicator and predictive risk intelligence systems.
- Validate, monitor, and govern AI and machine-learning models for safety-critical decision support.
- Apply AI-assisted causal analysis and natural-language processing to incident and organizational learning.
- Operationalize AI-generated risk intelligence through decision thresholds, intervention protocols, model governance, and continuous organizational learning.

### COURSE DETAILS

DATE

**June 30-July 1, 2027**

TIME

**8:00 AM-4:30 PM MST (UTC-7), each day**

FORMAT

**Live online via Zoom Workplace**

CREDIT

**1.6 CEUs**

EARLY BIRD **$1,095**

through May 31, 2027

Register Now

### PRACTICAL MATERIALS

- Leading-indicator and SIF development framework
- Data-quality and model-validity scorecard
- Causal-analysis and text-analytics templates
- Dashboard, model-card, and threshold tools
- Applied cases and Certificate of Completion

**Instructors: Sam Zarei, Ph.D., CSP, FRAeS | Kamran Gholamizadeh, MSc.**

CEUs and the Certificate of Completion require satisfaction of the published attendance, participation, and completion requirements.

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RAAI-AI202

# Applied AI for Human Factors and Ergonomics

## Dual-Lens HF&E Practice, Human-AI Teaming, and Applied Capstone Project

**Apply AI to improve HF&E practice—and assure human performance in AI-enabled systems.**

### FIVE PRACTICAL OUTCOMES

- Identify physical, cognitive, organizational, psychosocial, and human-AI interaction risks across complex work systems.
- Apply computer vision, wearables, digital ergonomics, and AI analytics to evaluate posture, movement, workload, fatigue, and exposure.
- Use AI-augmented systemic methods—including HFACS, AcciMap, FRAM, and STAMP/STPA—to analyze incidents and performance variability.
- Design and validate data-driven HF&E interventions using AI-generated insights, predictive analytics, and performance indicators.
- Evaluate and govern human-AI team performance through usability, trust, explainability, oversight, safety, privacy, fairness, and accountability.

### COURSE DETAILS

**DATE**

**July 28-29, 2027**
**Capstone 2-4 weeks later**

**TIME**

**8:00 AM-4:30 PM MST (UTC-7), each day**

**FORMAT**

**Hybrid live workshop + applied capstone project**

| DURATION | CREDIT |
|---|---|
| **20 contact hours** | **2.0 CEUs** |

**EARLY BIRD** **$1,395**

through July 14, 2027

**Standard: $1,595 beginning July 15, 2027**

**Register Now**

### PRACTICAL MATERIALS

- Computer-vision ergonomic analysis tools
- Wearable, fatigue, and workload assessment methods
- HFACS, AcciMap, FRAM, and STAMP/STPA templates
- Human-AI teaming, trust, XAI, and oversight evaluation tools
- Applied capstone project and Certificate of Completion

**Instructors: Naser Dehghan, Ph.D., CCPE | Sam Zarei, Ph.D., CSP, FRAeS**

CEUs and the Certificate of Completion require satisfaction of attendance, participation, and successful capstone requirements.

RAAI | RISK ANALYTICS AI

RAAI ACADEMY

RAAI-AI300

# AI Governance and Assurance for Safety Professionals

## Managing AI Risk, Safety Assurance, and Human Oversight in AI-Enabled Operations

## Build defensible governance and assurance for AI-enabled operations.

### FIVE PRACTICAL OUTCOMES

- Classify AI-enabled use cases using risk-based criteria for safety impact, uncertainty, autonomy, and operational consequence.
- Design AI governance frameworks that define accountability, approval authority, human oversight, escalation, and decision rights.
- Translate AI risk into verification, validation, safety-assurance, deployment, and residual-risk requirements.
- Monitor and audit AI-enabled operations for model limitations, drift, data quality, cybersecurity, privacy, vendor risk, control effectiveness, and governance performance.
- Operationalize AI assurance through monitoring thresholds, stop-use criteria, revalidation, incident response, CAPA, change control, and executive risk communication.

### COURSE DETAILS

**DATE**

**October 14-15, 2027**

**TIME**

**8:00 AM-4:30 PM MST (UTC-7), each day**

**FORMAT**

**Live online via Zoom Workplace**

**CREDIT**

**1.6 CEUs**

**EARLY BIRD** **$1,295**

through September 14, 2027

### PRACTICAL MATERIALS

- AI criticality and governance templates
- Human oversight and decision-authority tools
- V&V, validation, and assurance-evidence templates
- Vendor, monitoring, drift, incident, audit, and CAPA checklists
- Executive-ready outputs and Certificate of Completion

Register Now

**Instructors: Sam Zarei, Ph.D., CSP, FRAeS | Kamran Gholamizadeh, MSc.**

CEUs and the Certificate of Completion require satisfaction of the published attendance, participation, and completion requirements.

RAAI | RISK ANALYTICS AI

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EXPERT-LED DELIVERY

# Research-grounded. Computational. Application-led. Human-accountable.

Every course integrates safety science, risk engineering, advanced analytics, human factors, ergonomics, and responsible AI governance and assurance.

### Sam Zarei, Ph.D., CSP, FRAeS



**Associate Professor of Safety Science | CEO, Risk Analytics AI (RAAI)**

sam@raaihq.com

AI-enabled safety and risk intelligence, system safety, human factors, resilience, and responsible AI governance and assurance.

15+ years of academic and industry experience across aviation, aerospace, energy, and manufacturing, with expertise in EHS/HSE, system safety, risk engineering, and responsible AI integration.

### Kamran Gholamizadeh, MSc



**AI & Risk Analytics Specialist | HSEQ Manager | CRIO, Risk Analytics AI (RAAI)**

Predictive safety analytics, computational risk modeling, leading indicators, critical-control assurance, and AI-enabled risk intelligence.

Integrates safety, risk and reliability engineering, organizational learning, and EHS/HSE management into AI-enabled predictive analytics.

### Naser Dehghan, Ph.D., CCPE



**Human Factors and Ergonomics Specialist**

AI-enabled ergonomic risk assessment, computer vision, wearable sensing, workload and fatigue analytics, and human-centered AI systems.

Integrates physical and cognitive ergonomics, human performance, usability, human-AI teaming, and systemic safety methods across complex and safety-critical work systems.

## APPLICATION-HEAVY LEARNING FOR WORKING PROFESSIONALS

**60-70%**

**Labs, scenarios, professional artifacts, applied capstone work, and expert feedback.**

**PRACTITIONER LANE**

No-code and low-code tools, spreadsheets, business intelligence, approved AI platforms, and vendor applications.

**ANALYST LANE**

Optional Python, APIs, data pipelines, model evaluation, computer vision, and advanced analytics for deeper technical implementation.

RAAI operates independently and is not affiliated with, sponsored by, or endorsed by Embry-Riddle Aeronautical University.

**View Instructor Profiles**

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2027 PUBLIC OFFERINGS

# Choose your next AI capability

All prices are in USD. Public offerings use live online and hybrid applied formats and are scheduled in MST (UTC-7).

| Course | Date | Hours / CEUs | Early Bird | Standard |
|---|---|---|---|---|
| **RAAI-AI100**<br>**AI Literacy and Competency** | March 17, 2027 | 8h<br>0.8 CEUs | $595<br>through Feb. 15, 2027 | **$695** |
| **RAAI-AI200**<br>**AI-Enabled Hazard and Risk Management** | May 12-13, 2027 | 16h<br>1.6 CEUs | $1,095<br>through Apr. 12, 2027 | **$1,295** |
| **RAAI-AI201**<br>**Predictive Safety and Risk Analytics** | June 30-July 1, 2027 | 16h<br>1.6 CEUs | $1,095<br>through May 31, 2027 | **$1,295** |
| **RAAI-AI202**<br>**Applied AI for Human Factors and Ergonomics** | July 28-29, 2027<br>+ capstone | 20h<br>2.0 CEUs | $1,395<br>through July 14, 2027 | **$1,595** |
| **RAAI-AI300**<br>**AI Governance and Assurance** | Oct. 14-15, 2027 | 16h<br>1.6 CEUs | $1,295<br>through Sept. 14, 2027 | **$1,495** |

PUBLIC REGISTRATION

## Choose the course that matches your immediate capability gap.

Each course page includes full outcomes, materials, CEUs, participant terms, and secure Stripe-hosted registration.

View All Courses

ORGANIZATIONS

## Build AI-driven risk intelligence and governed capability across your team.

Ask about private instructor-led cohorts, organizational delivery, and applied cases aligned with your industry and operating context.

Request a Private Cohort

academy@raaihq.com

AI202 includes an applied capstone presentation 2-4 weeks after the live workshop. CEUs and Certificates of Completion require satisfaction of the published attendance, participation, and completion requirements for each course.