Learnsoft
ENTERPRISE TRAINING

AI in Construction

Length: 1 Day (or 2 half-day sessions)

Summary: This two-session virtual course introduces construction professionals to practical applications of artificial intelligence in the construction industry. Through hands-on activities, discussions, and real-world examples, participants will learn how AI tools can enhance productivity, safety, and decision-making in construction projects. The course emphasizes practical implementation and helps participants develop strategies for integrating AI into their daily work, regardless of their current access to AI tools.

Learning Objectives: After completing this course, participants will be able to:
1. Explain fundamental AI concepts and their relevance to construction
2. Identify practical applications of AI in construction projects and operations
3. Use basic AI tools to solve common construction-related challenges
4. Evaluate potential AI implementation opportunities in their work
5. Create a practical plan for integrating AI into their construction workflows

COURSE CONTENT

Session 1: Foundations and Basic Applications (3 hours)

Module 1: Introduction to AI (45 minutes)
- Opening activity: "What comes to mind when you hear 'AI'?" (Group discussion)
- Basic AI concepts and terminology
- Types of AI relevant to construction
- Knowledge Check: AI Basics Quiz
- Breakout Activity: Identifying AI myths in construction

Module 2: AI Tools Overview (55 minutes)
- Introduction to ChatGPT and Claude
- Demo: Basic interaction techniques
- Partner Activity: Practice basic prompts
- Knowledge Check: Tool Capabilities
- Individual Exercise: Writing effective prompts

[20-minute break]
Module 3: Construction-Specific Applications (60 minutes)
- Use cases in construction:
  - Safety documentation
  - Material calculations
  - Schedule optimization
  - Code compliance checks
- Demo: Solving common construction problems
- Breakout Activity: Problem-solving scenarios
- Knowledge Check: Application Matching

Session 2: Advanced Applications and Implementation (3 hours)

Module 4: Advanced Use Cases (45 minutes)
- Project planning and estimation
- Risk assessment
- Quality control documentation
- Site logistics optimization
- Partner Activity: Creating project schedules with AI
- Knowledge Check: Use Case Analysis

Module 5: Practical Implementation (55 minutes)
- Best practices for AI integration
- Common challenges and solutions
- Ethics and safety considerations
- Breakout Activity: Overcoming implementation barriers
- Knowledge Check: Implementation Planning

[20-minute break]

Module 6: Integration Planning (60 minutes)
- Individual Exercise: Personal AI implementation plan
- Small Group Reviews: Plan feedback and refinement
- Final Presentation: Selected participants share plans
- Action Item Development
- Course Wrap-up and Resources

Activities Details for above

Breakout Activities:
1. AI Myths in Construction (4-5 people)
   - Groups analyze common misconceptions
   - Present findings to main group

2. Problem-solving Scenarios (2-3 people)
   - Work through real construction challenges (Can be customized)
   - Practice using AI tools for solutions

3. Implementation Barriers (4-5 people)
   - Identify potential obstacles
   - Develop practical solutions

Partner Activities:
1. Basic Prompt Practice
   - Partners take turns writing and refining prompts
   - Share successful approaches and surprises

2. Project Schedule Creation
   - Work in pairs to develop AI-assisted project schedules
   - Compare different approaches

Individual Assignments:
1. Prompt Writing Exercise
   - Create prompts for specific construction tasks
   - Test and refine approaches

2. Implementation Planning
   - Develop personal AI integration strategy
   - Create 30-60-90 day action plan

Knowledge Checks (At the end of each Module)
- Multiple-choice questions
- Scenario-based problems
- Tool capability matching
- Application identification
- Best practices recognition

Resources Provided
- AI Tool Quick Reference Guide (Can be customized to client)
- Prompt Engineering Best Practices
- Implementation Planning Worksheet
- Use Case Library
- Additional Learning Resources List
- Community of practice recommendations to keep learning as a team