COURSE SYLLABUS

AI for Federal Acquisition & Contracting Course (Self-Paced)

This course teaches federal acquisition professionals how to use artificial intelligence tools responsibly across the procurement lifecycle. It focuses on applying AI to drafting, requirements development, and market research while maintaining compliance and protecting sensitive information.

> Group classes (Live Online) and onsite training are available for this course. For more information, email onsite@graduateschool.edu or visit: https://www.graduateschool.edu/courses/ai-for-federal-acquisition-contracting-course-self-paced



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Course Outline

Module 1: AI Foundations for the Acquisition Professional (Approx. 50 minutes)

- Define key AI terms relevant to acquisition work, including large language models, generative AI, prompts, tokens, and hallucinations.
- Describe, at a high level, how large language models generate text in a non-technical way.
- Recognize how AI is being adopted across the federal landscape, including OMB guidance and the evolving policy environment.
- Apply responsible AI practices to protect PII, CUI, and contractor proprietary information.
- Identify AI limitations such as hallucinations, bias, and confidentiality risks, and explain why human review is required.
- Locate and follow agency acceptable use policies for AI tools.
- Hands-On Activity: AI Guardrails Check, identify sensitive data in an acquisition scenario and rewrite prompts to remove restricted information.

Module 2: Drafting Performance Work Statements and Statements of Work with AI (Approx. 60 minutes)

- Compare performance work statements and statements of work, and identify when each is appropriate, with a brief reference to FAR Part 37.
- Build effective prompts for acquisition documents using context, constraints, and formatting instructions.
- Structure prompts for common PWS sections, including objectives, scope, tasks, deliverables, performance standards, and quality assurance.
- Use iterative follow-up prompting to improve, expand, and reorganize AI-generated drafts.
- Recognize common pitfalls such as generic language, missing compliance elements, and overreliance on AI outputs.
- Apply a human-in-the-loop review checklist to validate AI-assisted acquisition document drafts.
- Hands-On Activity: Draft a PWS Section, generate a section from a scenario and refine the output through review and improvement.

Module 3: AI-Assisted Requirements Generation and Market Research (Approx. 60 minutes)

- Generate and organize functional and technical requirements based on stakeholder inputs.

- Use AI to support market research activities, including identifying potential vendors, summarizing capabilities, and drafting market research narratives, with a brief reference to FAR Part 10.
- Draft evaluation criteria and rating scales with AI support.
- Develop an IGCE framework and create prompts to support pricing research.
- Apply prompt strategies to convert vague needs into structured and actionable requirements.
- Perform quality control by cross-checking AI-generated outputs against program objectives and FAR compliance.
- Hands-On Activity: Requirements Generator, produce requirements, a market research summary, and draft evaluation factors using an iterative prompt and refine workflow.

Module 4: Putting It All Together, Capstone Exercise and Toolkit (Approx. 50 minutes)

- Apply an end-to-end workflow that uses AI to support acquisition planning and documentation.
- Build a reusable personal prompt library for PWS, SOW, requirements, market research, and evaluation criteria.
- Identify change management considerations for introducing AI tools to an acquisition team.
- Use resources to stay current on evolving federal AI policy and acquisition-related AI developments.
- Summarize key takeaways and apply best practices through discussion and Q and A.
- Capstone Activity: Mini Acquisition Package, create a small documentation package including a PWS or SOW section, key requirements, and draft evaluation criteria, then present for peer and instructor feedback.