

The background features a light blue and white color scheme with various icons. At the top left, there are icons for a document with a checklist and a smartphone. In the center, a large circular graphic contains icons for a document with a pencil, a circuit board, and a speech bubble. To the right, there is a network diagram with a brain icon. The bottom of the image shows a desk with an open book, a laptop displaying a website, a pen, and a spiral notebook.

Re-Designing a Graduate Class for Technical and Professional Communication with an AI-Enhanced Learning Experience

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OILS-593: AI for Learning Design Final Project
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The Learning Problem

Why This Learning Experience Matters



This course is a redesigned graduate-level Technical Communication experience that teaches students to design, evaluate, and refine **technical communication content** within a human–AI collaborative workflow. Building on foundations such as usability testing, user-centered design, audience analysis, and iterative design, the course positions AI tools such as ChatGPT, Claude, Gemini, and Copilot as co-designers that students must guide, question, and refine. Rather than using AI for quick answers, students learn to critically evaluate outputs for accuracy, usability, and ethics, ensuring all communication meets real user needs. By the end of the course, students are not just document creators but AI-augmented communicators capable of designing effective communication in increasingly automated environments.

Students develop key competencies, including:

- **Prompting as design** (intentionally shaping AI outputs for specific audiences and tasks)
- **AI-assisted usability practice** (co-creating artifacts such as empathy maps, personas, test plans, student-led discussion topics, and UI critiques)
- **Critical AI literacy** (identifying bias, hallucination, gaps, and misalignment with audience needs)
- **Ethical and accountable communication** (ensuring accessibility, accuracy, and responsible AI use across all assignments)
- **Human–AI collaboration workflows** (iterating between AI generation, human critique, and user-centered revision)

By the end of the course, students are not just document creators but AI-augmented communicators capable of designing effective communication in increasingly **AI-driven environments**.

Learners & Context

Who Are the Learners & Where Learning Happens



This course is designed for graduate-level students in Technical Communication, UX, or related fields who are developing advanced skills in designing effective, user-centered communication. Learners are likely balancing coursework with professional or personal responsibilities and bring varying levels of experience with AI tools. The course is delivered fully online and asynchronous through Canvas LMS over 8 weeks, allowing flexibility while emphasizing consistent, hands-on engagement. Students actively work with generative AI tools such as ChatGPT, Claude, Gemini, or Copilot through a paid subscription, enabling sustained practice with real-world AI workflows and iterative design processes.

Learners:

- Graduate students in Technical Communication, UX, or related programs
- Mixed experience levels with AI tools and digital design practices
- Motivated by career advancement and practical, applied skills
- Balancing academic, professional, and personal commitments

Learning Environment:

- Fully online and asynchronous in Canvas LMS
- 8-week accelerated course format
- Hands-on, project-based learning with real-world artifacts
- Required use of at least one paid GenAI tool (ChatGPT, Claude, or Copilot) for sustained interaction and iteration

Learning Objectives

Target Skills & Outcomes



Targeted Skills & Outcomes

This course develops students' ability to create effective technical communication through intentional collaboration with AI tools. Students build skills in prompt design, usability evaluation, and revision while applying core principles such as audience analysis, diversity, equity, inclusion, accessibility, user-centered design practices, and localization where applicable. Through hands-on work and reflection, students learn to improve AI-generated content and ensure it meets ethical standards and user needs.

Learning Objectives

By the end of this course, students will be able to:

- **Design** effective prompts for generative AI tools (e.g., ChatGPT, Claude, Gemini, Copilot) to produce technical communication content tailored to specific audiences, purposes, and contexts.
- **Evaluate** AI-generated technical communication artifacts for usability, accuracy, accessibility, and alignment with audience needs, including considerations of diversity, equity, and inclusion.
- **Revise** AI-generated and human-authored content to improve clarity, usability, and accessibility using user-centered design principles and localization strategies.
- **Develop** technical communication artifacts (e.g., usability test plans, instructions, UI critiques, memoranda) through iterative human–AI collaboration, demonstrating effective workflow between AI generation and human refinement.
- **Justify** design decisions and AI use through written and oral communication (e.g., final project and student-led discussion), demonstrating ethical awareness, critical AI literacy, and responsibility for audience-centered outcomes.



What Was Designed

AI-Enhanced Learning Activity & System Overview

- This 8-week, fully online asynchronous course is designed as a scaffolded, AI-integrated learning experience where students progressively build skills in technical communication through human–AI collaboration. Early weeks focus on activating prior knowledge and developing foundational AI literacy, followed by guided practice using generative AI tools such as ChatGPT, Claude, Gemini, and Copilot.
- Beginning in Week 3, students take on leadership roles by facilitating discussion, reinforcing peer learning and reflection. Mid-course, students engage in hands-on design challenges (RVR assignments) where they co-create technical communication artifacts with AI and critically evaluate their outputs.
- The course culminates in a final project in which students redesign an existing technical communication artifact using AI, justify their decisions, and reflect on both AI and human feedback.



What Was Designed (Continued)

8-Week Scaffolded Learning Plan

Week	Focus	Learning Activities / Assignments
Week 1	Foundations + Prior Knowledge	Course introduction; student introduction post; reflect on prior AI experience and define what student's think technical communication encompasses.
Week 2	AI Literacy + Tools	Readings, videos, and tutorials on ChatGPT, Claude, Gemini, Copilot; these will explore features such as artifacts, projects, and connectors; guided practice prompts, and bot creation. Define what Technical Communication is after the readings within instructor guided discussion prompt and share 2 things they learned that they didn't know from the application-based tutorials with the class.
Week 3	Prompting + AI Collaboration	Advanced prompting strategies; compare AI outputs; begin student-led discussions (2-3 student facilitators per week) . Each student submits 1 question for the discussion board based the on the week's topics.
Week 4	Applied Design Challenge 1 (RVR)	<ul style="list-style-type: none"> Students select 1 of 6 Reading / Viewing Response (RVR) instruction prompts; co-create first artifact with AI (e.g., instructions, UI critique, usability task); Student-led discussion continues. Respond to at least 1 peer. Respond to at least 1 RVR Design Challenge each week to provide feedback to peers.
Week 5	Applied Design Challenge 2 (RVR)	
Week 6	Applied Design Challenge 3 (RVR)	
Week 7	Final Project Development with Peer Review Response	Redesign an existing technical communication artifact using AI; show original vs redesigned version; justify decisions and submit for peer review; Student-led discussion continues.
Week 8	Final Project and Course Reflection	Reflect on final project feedback from peers and AI collaboration decisions then respond on why you would or wouldn't take the feedback suggested from your peers. Provide a summative paragraph on what you learned in this class and how it will help you become a better technical communicator. Last Student-led discussion.



Why AI?

How Generative AI Improves This Learning Experience

Generative AI enhances this learning experience by transforming technical communication from a static writing task into a dynamic, iterative design process. Instead of producing content in isolation, students engage in real-time collaboration with AI tools to generate, test, and refine communication artifacts. This allows for rapid prototyping, immediate feedback, and exposure to multiple approaches, which deepens learning and supports experimentation. AI also makes invisible processes visible by surfacing assumptions, gaps, and biases that students must critically evaluate. As a result, learners develop not only stronger technical communication skills but also the ability to effectively guide, assess, and take responsibility for AI-supported work in real-world contexts.

How Generative AI Improves This Learning Experience:

- **Enables rapid prototyping** of technical communication artifacts through AI-generated drafts
- **Provides immediate, iterative feedback** to support revision and refinement
- **Exposes multiple approaches and perspectives** to deepen understanding of audience and design choices
- **Surfaces gaps, biases, and assumptions** that students must critically evaluate
- **Supports active, hands-on learning** through continuous human–AI interaction
- **Builds real-world collaboration skills** for working effectively with AI tools

Pedagogical Approach

Learning Theories Applied + How They Show Up



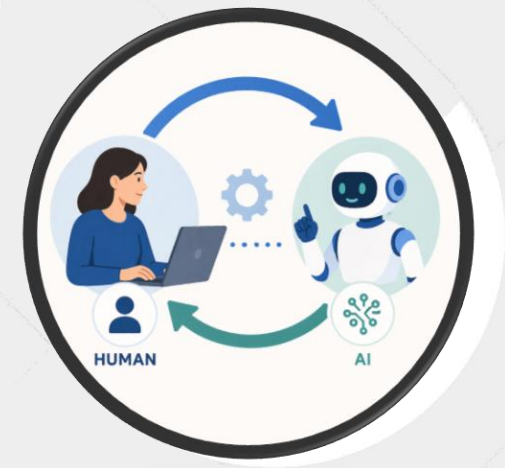
This course is grounded in a combination of constructivist learning, cognitive apprenticeship, and self-regulated learning, applied through an AI-supported, project-based environment. Students learn by actively creating, testing, and refining technical communication artifacts while collaborating with generative AI as a co-designer. The course models expert thinking through guided prompting and critique, then gradually shifts responsibility to students as they evaluate and improve AI-generated outputs. Reflection, iteration, and real-world tasks are central, helping students develop both technical communication expertise and the ability to manage AI as part of their workflow.

How These Theories Show Up:

- **Constructivism (learning by doing)**
Students create and revise artifacts such as instructions, test plans, and UI critiques through hands-on AI interaction
- **Cognitive Apprenticeship (modeling and coaching)**
Instructor models effective prompting, evaluation, and revision strategies before students apply them independently
- **Self-Regulated Learning (metacognition and reflection)**
Students reflect on AI outputs, their decisions, and revisions through memos and discussions
- **Project-Based Learning (authentic tasks)**
Assignments mirror real-world technical communication tasks using AI-supported workflows
- **Human–AI Co-Creation (emerging practice)**
Students iteratively collaborate with AI tools, learning to guide, critique, and refine outputs responsibly

Human + AI Roles

Who Does What: Learner, AI, Instructor



This course is designed around a clear division of roles between learners, AI tools, and the instructor, emphasizing intentional human and AI collaboration. Students act as designers and decision-makers who guide, evaluate, and refine AI-generated content. AI tools such as ChatGPT, Claude, and Copilot function as generative partners that produce drafts, suggest ideas, and support iteration but require critical oversight. The instructor models effective practices, provides feedback, and facilitates learning, ensuring alignment with technical communication principles, ethics, and user-centered outcomes.

Roles in the Learning Experience:

Learner (Primary Agent)

- Designs prompts and guides AI output
- Evaluates content for usability, accuracy, and audience needs
- Revises and takes responsibility for final artifacts
- Reflects on AI use, limitations, and ethical considerations

AI Tools (Co-Designer)

- Generate drafts, ideas, and alternative approaches
- Support rapid prototyping and iteration
- Surface gaps, assumptions, and potential biases
- Do not make final decisions or ensure accuracy

Instructor (Coach and Facilitator)

- Models prompting, evaluation, and revision strategies
- Provides feedback on artifacts and AI use
- Guides discussion and critical reflection
- Ensures alignment with ethics, accessibility, and course objectives

Learning Workflow

Step-by-Step Learner Journey

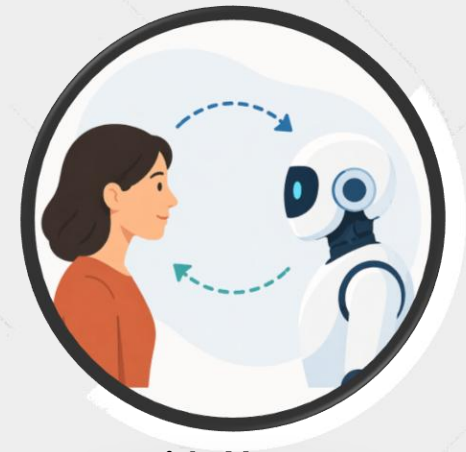


The learner journey is designed as a scaffolded process in which students move from orientation and AI exploration to guided practice, artifact creation, peer discussion, and final redesign. Across the 8-week course, students repeatedly interact with AI tools to generate ideas, evaluate outputs, revise artifacts, and reflect on their decisions. This workflow helps students build technical communication skills while learning how to collaborate critically and responsibly with AI.

Step	Phase	What Learners Do	Where AI Enters
1	Orient	Introduce themselves, reflect on prior AI experience, define technical communication	Minimal use, awareness and reflection on prior exposure
2	Explore	Learn tools through tutorials and guided activities	Use ChatGPT, Claude, Copilot to explore features and capabilities
3	Practice Prompting	Experiment with prompts and compare outputs	Generate and refine AI responses for different tasks
4	Discuss and Lead	Participate in and facilitate discussion boards	Share AI experiences, prompts, and outputs with peers
5	Create Artifacts	Complete RVR design challenges and produce artifacts	Co-create drafts and ideas using AI tools
6	Evaluate and Revise	Assess artifacts for usability, audience, accessibility, and ethics	Critique AI outputs and improve them through iteration
7	Redesign Final Artifact	Redesign an existing technical communication artifact	Use AI to generate, test, and refine redesigned content
8	Reflect and Respond	Share final project, respond to feedback, justify decisions	Explain AI use, evaluate feedback, and refine decisions

AI in Action

Key AI-Supported Interactions (Examples)



Week 1: AI Awareness and Reflection

Students reflect on prior AI use and define technical communication, surfacing assumptions about AI's role in communication work

Week 2: AI Tool Exploration

Students learn to use ChatGPT, Claude, Gemini, or Copilot to generate simple outputs and explore features, building foundational AI literacy

Week 3: Prompting and AI Collaboration

Students learn about, design and refine prompts, and begin using AI as a collaborative partner

Weeks 4–6: Applied Design Challenges (RVRs)

Students co-create technical communication artifacts with their choice of GenAI, then revise for usability, audience, accessibility, and ethics

Week 7: Final Project Development with AI

Students use AI to redesign an existing technical communication artifact and justify design and content decisions

Week 7: AI-Supported Peer Review

Students engage with peer work and can use AI to help analyze and generate feedback alongside applying human judgment

Week 8: Reflection on AI Collaboration

Students use AI to generate and refine a final learning statement, then explain how they used AI, what they accepted or rejected, and how human decisions shaped the final outcome

Prototype Sketch

AI-Integrated Learning Environment (Interface Mockup)



☰ AI-Enhanced Technical Communication 🔔 💬 👤

Modules

- 🏠 **Week 1**
Foundations + Prior Knowledge
- 📖 **Week 2**
AI Literacy + Tools
- 💬 **Week 3**
Prompting + AI Collaboration
- Week 4**
Applied Design Challenge
- 📄 **Week 5**
Applied Design Challenge
- 📄 **Week 6**
Applied Design Challenge
- ★ **Week 7**
Final Project + Peer Review Response
- 👤 **Week 8**
Final Project + Course Reflection

Week 4: Applied Design Challenge

[Overview](#) Resources Assignment Examples Rubric

Assignment Overview

Choose one of the RVR prompts below and use AI tools to co-create a technical communication artifact. Revise for usability, audience, accessibility, and ethics.

Your Task

1. Generate with AI
2. Revise for usability
3. Submit + reflect

RVR Prompt Options (Choose 1)

- 1. Improve a set of instructions
- 2. Create a UI critique
- 3. Develop a usability task
- 4. Transform information for a new audience

Remember: You are the designer. AI is your tool and collaborator, but you are responsible for the final product.

RVR Discussion Board
Post your artifact and respond to peers. >

Student-Led Discussion Board
View discussion materials and join the conversation. >

Workflow Diagram

End-to-End Learning + AI Interaction Flow



Measurement of Learning

How Learning Is Assessed + Evidence for Grading



Learning in this course is assessed through a combination of formative and summative measures that capture both the process and products of human and AI collaboration. Formative assessment occurs through weekly discussion posts, RVR artifacts, and peer feedback, allowing students to iteratively improve their work and reflect on their use of AI. Summative assessment is demonstrated through the final project, where students redesign a technical communication artifact and justify their decisions, including how AI was used. Evidence for grading includes student-generated artifacts, AI interaction reflections, discussion participation, and a final course feedback survey that captures student perceptions of learning, AI use, and overall course effectiveness.

Category	What Is Assessed	Evidence Collected
Formative Assessment	Ongoing learning, skill development, and AI collaboration	Weekly RVR discussion posts, peer responses, student-led discussions, AI collaboration memos, iterative drafts and revisions
Summative Assessment	Final demonstration of learning and application	Final project redesign, justification of design decisions, final learning statement
Evidence for Grading	Quality of work and engagement	Discussion participation, artifacts and revisions, AI use documentation, final project comparison (original vs redesigned)
Course Feedback	Student experience and course effectiveness	End-of-course survey on AI tools, learning experience, confidence with AI, and suggestions for improvement

Risks & Limitations

Challenges of Using AI + Mitigation Strategies

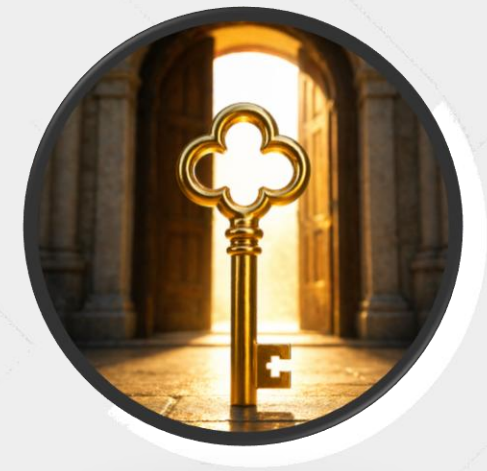


While integrating AI into technical communication learning offers significant benefits, it also introduces risks related to accuracy, overreliance, bias, and ethical use. This course addresses these challenges by positioning AI as a collaborative tool rather than an authoritative source. Students are required to critically evaluate AI outputs, reflect on their decisions, and apply user-centered design principles to ensure all work meets standards for accuracy, accessibility, and inclusivity. Through structured activities, transparency requirements, and iterative feedback, the design mitigates risks while building responsible and informed AI use.

Challenge	Mitigation Strategy
Overreliance on AI	Require students to revise, justify decisions, and reflect on what they changed or rejected
Inaccurate or misleading outputs	Emphasize evaluation, fact-checking, and usability testing of AI-generated content
Bias and lack of inclusivity	Integrate diversity, equity, inclusion, and accessibility checks into all assignments
Surface-level learning	Use iterative workflows, peer feedback, and revision cycles to deepen engagement
Misuse or lack of transparency	Require documentation of AI use in memos, discussions, and final projects
Tool limitations or variability	Encourage comparison across tools (ChatGPT, Claude, Copilot) and critical analysis of outputs

Key Takeaways

Why This Design Works + Future Improvements



Why This Design Works:

- Integrates AI as a **learning partner**, not just a tool for output
- Aligns AI use with **authentic technical communication tasks**
- Emphasizes **iteration, feedback, and revision**, mirroring real-world practice
- Builds **critical AI literacy**, not passive reliance on AI
- Centers **audience, accessibility, and inclusive design** in all activities
- Uses discussion boards to support **peer learning and knowledge construction**

Future Improvements:

- Develop a **custom AI workspace or embedded tool** within Canvas for smoother interaction
- Add more **guided prompt scaffolds and examples** for early learners
- Incorporate **lightweight usability testing cycles** for student artifacts
- Expand **AI ethics scenarios** with real-world case studies
- Refine assessment with **rubrics that evaluate AI use, not just final products**

AI Statement

How I Used AI

This project was developed with the support of generative AI as a design collaborator. AI was used to brainstorm ideas, refine the learning workflow, generate visual assets, and iterate on the instructional design. All final design decisions, structure, and pedagogical choices were made by myself.



Thank You