

TECM 4010 – AI and Automation in Technical Communication

Fall 2026 | Face-to-Face | 10690

Meeting Time: 9:35am – 10:55am Tu/Th
Meeting Location: AUSB 308
Instructor: Dr. Mason Pellegrini
Email: mason.pellegrini@unt.edu
Office Location: LANG 407G & [Zoom](#)
Office Hours: 11am-12pm, Tu/Th

Course Information

Course Description

This course explores the impact and application of generative AI in technical and professional communication. Students will learn how to work with generative AI across different stages of professional communication and design processes, from idea generation and research to drafting, revision, and delivery, while critically examining the ethical, rhetorical, and practical implications of AI-assisted work. Through activities, discussions, and projects, students will gain hands-on experience using AI to explore, develop, and execute professional communication tasks across a range of contexts and genres. Emphasis is placed on understanding when and how AI is most effective, where its limitations emerge, and how human judgment remains central to professional communication. The course also explores how generative AI is reshaping industries, professions, knowledge work, and society more broadly, including its implications for credibility, creativity, authorship, and the future of professional writing.

Learning Outcomes

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

- Use generative AI strategically to support professional communication tasks across multiple stages of the design and writing process, including idea generation, research, drafting, revision, and editing
- Design, test, and refine prompts as rhetorical instructions that shape AI outputs for specific audiences, purposes, and professional contexts
- Evaluate the strengths and limitations of generative AI for different types of professional communication work, exercising judgment about when and how AI should be used
- Critically examine the societal and professional implications of generative AI, including its influence on industries, workplace practices, accessibility, and inequality
- Analyze ethical considerations related to generative AI use in professional contexts, including issues of authorship, accountability, bias, misinformation, and responsible integration of AI-generated content

Required Materials

- Readings will be provided on Canvas
- A laptop for each class session (you will write and use AI in class – laptops can be rented from the TECM Tech Lab in AUSB 307 if you don't have one)
- UNT email access

- Canvas access

Methods of Communication

Email is the best way to reach me (mason.pellegrini@unt.edu). During the semester, I usually respond to emails within a business day (9AM–5PM M-F). Also, before sending me an email, make sure to check any documents I have provided which might answer your question first. In other words, read the syllabus first if you have class policy questions or the assignment sheet first if you have assignment questions. In general, please remember to write professionally when you send me an email (I am a writing teacher after all!).

If you have something more complicated you want to speak about, consider scheduling a meeting with me. I have my office hours set aside so that any of you can drop in and get extra feedback on an assignment, discuss grades, or even ask for help writing something from outside class. While you can come to my office hours unannounced, send me an email in advance if you can. I am also flexible about scheduling meetings outside my office hours, especially when it comes to scheduling a Zoom meeting.

Major Assignment Descriptions and Grade Value

Below, I include short descriptions of all of the work you will complete in this class as well as how much of your total grade each project or assignment type is worth.

- **The Impact of AI Project (15%)**
You will research and analyze how generative AI is affecting a professional field or industry you care about. Drawing on secondary research and course concepts, you will examine changes to professional practices, skills, and ethical considerations. The project will culminate in a written report and an informal presentation that articulates the implications of generative AI for that field.
- **Prompt Library Project (5%)**
You will create a small collection of prompts designed to guide generative AI in producing different kinds of professional writing (e.g., brainstorming, drafting, revising). For each prompt, you will briefly explain why you made it that way. This small assignment is part of the larger “Mapping the Jagged Frontier” unit.
- **Mapping the “Jagged Frontier” Project (15%)**
You will examine the capabilities and limitations of generative AI in professional communication through a combination of secondary research and hands-on experimentation. Drawing on published discussions of generative AI, you will identify commonly cited strengths and weaknesses and test them.
- **AI Application Part One: AI-Enhanced Professional Work (20%)**
You will use generative AI to help you produce a piece of professional communication you actually need to create. The deliverable should be polished, complete work that could function in its real-world context. A reflection memo will document how and at what stages you used AI, what improved as a result, and how you maintained authorship and judgment – in other words, you will explore and develop your own ethical AI-workflow.
- **AI Application Part Two: AI for Capability Enhancement (20%)**

You will use generative AI to build something genuinely beyond your current capabilities—a deliverable requiring expertise or time you do not have. A reflection memo will explain how AI bridged the gap between your skills and the finished product, where it fell short, and how you stayed accountable for the result.

- **Participation (20%)**
You will be expected to attend class throughout the semester and complete in-class assignments.
- **Reading Comprehension Quizzes (5%)**
Several times in the semester, I will give you a pop quiz on the reading. Collectively, these quizzes will be worth 5% of your grade. Each quiz will have a single question.

Grading Policies

Participation Grade

20% of your grade is based on how many of the total classes you attended. This is both to incentivize you to come to class, but also to have the work we do in class reflected in the grade. I will give two free absences, but after that, I will give you whatever percentage of the total classes you attended as your grade. For example, if you missed four out of 32 classes, that would mean that you attended 87.5% of the classes, so you would receive 87.5% of that total 20% of your grade.

I also reserve the right to lower someone's grade in this area if a student misbehaves in class, particularly if they do this in a way which is distracting to me and/or other students (like playing video games or wearing headphones/listening to music while I'm lecturing or frequently showing up very late).

Major Assignments

Major assignments (i.e., the main projects described above) will constitute the majority of the points you receive in this class. Each of the main projects you complete may consist of more than one part (i.e., one major project might consist of two or three separate, smaller documents). I will outline each of these major assignments on an assignment sheet, which will include a rubric that breaks down how many points each part of the assignment is worth. I (or my TA) will always fill out this rubric when evaluating your major assignment, so you can see how your grade was determined. You can expect to receive grades within one week of the project deadline.

Percentage Breakdown of Final Grades

The grading criteria below serve as general guidelines for evaluating all assignments. Assignment-specific rubrics will be housed on Canvas.

Grade	Percentage	Description
A	90-100%	Work is a pleasure to read, with excellent content, grammar, sentence structure, mechanics, and visual design. It is thorough, complete, coherent, well organized, well supported, and demonstrates a superior understanding of audience, purpose, and rationale.
B	80-89.99%	Work is well written and well produced and demonstrates a substantial contribution to the learning process. It is sufficiently developed, organized, and supported, showing a solid understanding of audience, purpose, and rationale.

C	70-79.99%	Work contains clear but underdeveloped ideas or does not fully engage the reader. Some errors in grammar, mechanics, or logic may be present.
D	60-69.99%	Work is difficult to understand and may include incomplete information, serious grammar or mechanical problems, weak organization, or conceptual confusion.
F	Below 60%	Work fails to address the assignment, is severely underdeveloped, demonstrates incompetence, or is grammatically and mechanically incomprehensible. Any evidence of plagiarism results in this grade.

Course Policies

Be Ready for Class

Nearly every day, I will come into class well-rested, well-nourished, well-prepared, in an upbeat mood, and ready to participate. I'm also going to do my very best to create a positive classroom environment and treat you all with respect. *I expect you all to do the same.*

Attendance

My job is to help you all to learn the class content. Since you can't learn when you aren't in class, attendance is required. In most cases, I will fail a student who has absences that are equal to three weeks of class. In other words, you may fail if you have three absences in a class that meets once a week or six absences in a class that meets twice a week. At my discretion, I will also mark students "absent" when they are over 10 minutes late. It's also your responsibility to remind me to put you on attendance if you show up late (I take attendance at the start of class). Beware, I'm not going to micromanage you in this area. It's your responsibility to know how many classes you've missed. Your first indication from me that you've missed too much may be an email informing you that you've failed the class. *Drop the class now if you cannot attend consistently or make it on time!*

I don't make any distinction between "excused" and "unexcused absences," though I still appreciate it when students email me to let me know that they are missing class. The only exceptions to my policy here are outlined in [UNT's official attendance policy](#) and includes pregnancy and parenting, military service, religious holy days, and official university functions. Despite these exceptions, you still need to communicate with me about your situation. Extreme illness or other extenuating circumstances need to be documented through the Dean of Students' office.

Submission and Late Work

You will submit all major assignments on Canvas by 11:59pm on a date listed on each assignment sheet. You must submit assignments in a format which Canvas can render (e.g., .doc, .docx, .pptx, .pdf, etc.). For every day that a major assignment is late, I will remove 10% of the total points from the grade you would have received. If you feel like you have extenuating circumstances, email me at least 48 hours in advance and ask for an extension. Normally, I am willing to grant extensions, but only if you ask in advance.

Generative AI

Obviously, you can use GenAI in this class. Each assignment sheet will specify in more detail which parts of the assignment you should use AI for and which you should not use AI for.

University Policies

University policies regarding [disability accommodations](#), [student attendance and authorized absences](#), and [student academic integrity](#) can be found at the respective links.

Course Outline

The course outline below gives the due dates of all major assignments and overviews the content that will be covered in each unit. I will distribute a detailed calendar before the start of each unit.

UNIT	CONTENT
Unit One Weeks 1-4 The Impact of Gen-AI	CONTENT: • AI and the automation of professions (losing jobs) • AI policies, education and plagiarism detection (ethics of use) • The environmental impact of generative AI • GenAI and replacing human relationships • Presentations DELIVERABLES: • The Impact of Gen-AI Project due 9/13 at 11:59pm
Unit Two Weeks 5-7 Prompt Engineering & Mapping the Jagged Frontier	CONTENT: • The history of technology's influence on writing • Moral panic and writing technology • The peaks and valleys of the Jagged Frontier • Prompt engineering techniques • When are we allowed to put content into an LLM? DELIVERABLES: • Prompt Library Project due 9/20 at 11:59pm • Jagged Frontier Project due 10/4 at 11:59pm
Unit Three Weeks 8-11 AI Application One: Enhanced Work	CONTENT: • Strengths and limitations of different LLMs and system settings • Integrating AI into writing and design processes • AI use policies, AI detectors, and copyright • AI to support research, literature reviewing, and source discovery • AI to enhance creativity, visualization, and multimodal communication DELIVERABLES: • AI Application Part One due 11/1 at 11:59pm
Unit Four Weeks 12-16 AI Application Two: Capability Extension	CONTENT: • Using AI to polish and improve writing; writing as thinking • Agentic AI, AI agents, and human-out-of-the-loop workflows • Vibe coding and building tools without knowing how to code • AI for business, entrepreneurship, and prototyping • AI for video, audio, and custom chatbots DELIVERABLES: • AI Application Part Two due 12/6 at 11:59pm