TECHNICAL WRITING - COM 313

Spring 2025 - Section 106, CRN 11714

Course Syllabus*

Classroom	Tiernan Hall 113
Schedule	Thursdays, 6:00 PM – 8:50 PM 01/21/2025 - 05/16/2025
Instructor Information	
Name	Annie Chatterjee, EdD, MLIS
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Office Location	CAB 1019
Office Hours	Tuesdays, 1:30 PM – 2:30 PM By appointment (Zoom meetings available upon request)

Course Description

COM 313: Technical Writing is designed to help students develop essential communication skills required in professional and technical environments. This course focuses on creating clear, concise, and audience-centered documents, including resumes, proposals, presentations, and instructional guides. Students will explore various technical communication formats, such as business correspondence, reports, and user guides, while considering ethical and cultural implications in writing.

The curriculum emphasizes practical applications like analyzing audience needs, designing visually effective documents, simplifying complex information for diverse readers, and working collaboratively. Through hands-on projects, students will learn to produce professional documents that meet real-world demands, ensuring usability, accessibility, and ethical communication practices.

What is Technical Writing?

Technical writing is a form of communication that simplifies complex information to make it understandable and actionable for a specific audience. It is widely used to explain technical, scientific, or specialized topics in a clear and effective manner. Whether explaining a concept, detailing a procedure, or presenting data, technical writing bridges the gap between expert knowledge and user understanding.

Examples of Technical Writing

- **User Manuals**: Provide step-by-step instructions for operating devices, machinery, or software.
- **Technical Reports**: Summarize experiments, research findings, or system performance in a formal format.
- **Proposals**: Present solutions to problems or make requests for funding with well-supported arguments.
- **FAQs and Help Guides**: Address common issues and questions with concise, actionable answers.
- **Process Documentation**: Detail workflows or procedures to ensure tasks are completed consistently and accurately.
- **Scientific Articles**: Outline research methods, findings, and implications for academic or professional audiences.

Learning Objectives

- Understand and apply the principles of technical communication across various formats and purposes.
- Create professional resumes, cover letters, and personal statements tailored to job applications.
- Develop effective proposals to address real-world problems and persuade stakeholders.
- Deliver engaging technical presentations for non-expert audiences using visual aids.
- Design and write clear, user-friendly instructional documents tested with real users.
- Gain proficiency in document design, including titles, abstracts, tables, graphs, and graphics.
- Analyze the ethical and cultural considerations involved in technical writing.
- Collaborate effectively in team-based writing and editing projects.
- Practice usability testing to improve the effectiveness of technical documents.

Required Materials and Learning Resources

1. **Textbooks:**
    - Open Technical Communications - https://digitalcommons.kennesaw.edu/facbooks/36/
    - Technical Writing Essentials - https://dev.pressbooks.usnh.edu/technicalwriting/
2. **Available AI Tool:**
    - **Grammarly** (including the generative AI functionality)

- Students will have access for the spring semester. Details on setting up the account to follow.

3. **Required AI and AI-Enhanced Tools:**
   - **Notebook LM**: AI tool for organizing notes and summarizing information. Notebook LM can be used to:
     - **Organize research notes**: Create notebooks for each project, summarizing key points and insights from research articles, job postings, and other materials.
     - **Generate drafts and summaries**: Use Notebook LM to help structure drafts for resumes, proposals, or instructional documents. It can synthesize information and suggest organization for content.
     - **Explore technical topics**: For the technical presentation or AI tool analysis, upload relevant documents, and use Notebook LM to summarize complex technical concepts or generate simplified explanations for a non-expert audience.
   - **Hypothes.is**: Open-source annotation tool for collaborative learning. Hypothes.is is a great tool for:
     - **Collaborative annotation**: While reviewing articles, websites, or documentation, use Hypothes.is to highlight key points and make shared notes. This is especially useful for group projects like the instructional document.
     - **Critical reading**: Mark up job postings or policy documents, identifying keywords, requirements, or persuasive language techniques that you can incorporate into your work.
     - **Tracking citations:** Highlight sources directly and link them to specific parts of your project (e.g., supporting claims in a proposal or user guide).
   - **Zotero**: Reference management tool for organizing citations. Zotero excels in:
     - **Reference management**: Collect and organize research articles, white papers, job postings, and technical documentation. Use it to generate citations and bibliographies for your projects.
     - **Tagging and categorization**: Use tags to group resources by project or topic, making it easy to retrieve relevant materials (e.g., "AI Tools," "Policy Research").
     - **Connecting with Hypothes.is**: Save annotated documents from Hypothes.is to Zotero for seamless integration of your research notes.

- **Collaboration**: Share Zotero libraries with teammates for group projects, ensuring everyone has access to the same resources.

4. **Recommended AI Tools:**
   - Research: Zotero, Connected Papers, Grobid.
   - Writing: LanguageTool, Hemingway, Proselint.
   - Collaboration: Etherpad, Joplin, Logseq.
   - Visualization: GraphSpace, Gephi.
   - Accessibility: WAVE, axe-core GitHub.

Grade Assessment

Your final grade will be based on the following:

Deliverable	Weight
Project 1: Job Application Package	20%
Project 2: Policy or Funding Proposal	20%
Project 3: Technical Presentation	20%
Project 4: Instructional Document	20%
Project 5: AI Tool User Guide	20%

Grading Scale

Grade	Score Range
A	90 and above
B+	87-89
B	80-86
C+	77-79
C	70-76

D	60-69
F	Below 60

Description of Major Projects

Project 1: Job Application Package

Prepare a professional resume and cover letter (or personal statement) tailored to a real-world job posting. Select a job in your desired field and customize your documents to highlight your relevant skills, experience, and accomplishments. Emphasis will be placed on clarity, formatting, and persuasive language that aligns with industry standards. For example, you might apply for a data analyst position, showcasing your proficiency in Python, SQL, and data visualization tools.

- Use Hypothes.is to annotate the job posting, highlighting key skills and requirements.
- Store relevant research about the company or industry in Zotero, tagging them for quick access.
- Use Notebook LM to draft and refine your resume and cover letter.

Project 2: Policy or Funding Proposal

Identify a critical problem in your field and propose a new policy or solution, aimed at persuading stakeholders to take action. This project involves extensive research, data analysis, and professional writing to craft a compelling argument. For instance, you could advocate for increased funding for renewable energy research by presenting environmental and economic benefits. The final proposal should be structured, evidence-based, and tailored to the target audience.

- Use Zotero to collect articles and data supporting your proposal.
- Annotate key statistics and arguments with Hypothes.is for easy reference.
- Leverage Notebook LM to outline your proposal and ensure logical flow.

Project 3: Technical Presentation

Deliver a concise 3-4 minute presentation on a technical topic, incorporating visual aids to communicate complex information to a non-expert audience. The focus will be on simplifying jargon and engaging the audience through clear visuals and relatable examples. For example, you could explain how machine learning algorithms detect spam emails, using diagrams and simple analogies. The presentation will be evaluated on clarity, engagement, and effectiveness of visual aids.

- Use Zotero to manage resources on your technical topic and organize visual aids.
- Use Notebook LM to draft the presentation and simplify jargon.
- Annotate key research with Hypothes.is to distill essential information for your audience.

Project 4: Instructional Document

Work collaboratively in a group of four (groups will be assigned by the professor) to create a user-tested "how-to" guide that effectively teaches users to navigate a specific task. This project emphasizes technical writing, usability testing, and iteration based on feedback. An example could be a step-by-step guide to setting up a personal budget using free software like Excel or Google Sheets. The final document should include visuals, troubleshooting tips, and clear instructions to ensure user success.

- Annotate user feedback with Hypothes.is during usability testing to track issues.
- Save and organize technical guides or examples in Zotero for reference.
- Draft the document collaboratively in Notebook LM.

Project 5: AI Tool User Guide (Final)

Analyze one of the listed open-access or free AI tools, or select another free tool (subject to professor approval), and develop a comprehensive user manual. The guide should detail the tool's key features, user cases, and troubleshooting steps, ensuring accessibility for users with varying technical expertise. For example, you could analyze and create a guide for the free version of LanguageTool, explaining its grammar-checking features, integration options, and customization capabilities. The manual should include annotated screenshots, practical examples, and a FAQ section to ensure user success and clarity.

- Use Hypothes.is to annotate the tool’s documentation, identifying key features.
- Store and organize resources about the tool in Zotero, tagging them as "Features" or "Troubleshooting."
- Use Notebook LM to create a structured, user-friendly manual with clear examples and FAQs.

Attendance and Participation Policies

- Excused absences require documentation for professional commitments, illness, or religious observances.
- Late work without an extension will receive reduced points but will still receive feedback.

- Participate in class discussions and activities to support your learning and that of your peers.

Academic Integrity

Adherence to NJIT's Academic Integrity Code is mandatory. Plagiarism is the act of using someone else's work, ideas, or language without proper acknowledgment, whether intentionally or unintentionally. This includes copying text, paraphrasing without citation, or presenting others' creations—whether from books, articles, websites, or AI-generated content—as your own. In a technical writing context, plagiarism undermines academic integrity, devalues the learning process, and erodes trust in professional environments. Students are expected to produce original work and appropriately cite all sources, including content generated with AI tools. Plagiarism is a serious offense and is punishable under university policy, which may include failing the assignment, the course, or further disciplinary action. Always strive for authenticity and proper attribution in your work.

Technology Use

Bring a laptop or tablet to class for accessing course materials on Canvas or participating in collaborative activities. Discussions on generative AI tools like ChatGPT will focus on ethical usage and limitations. AI will be used as directed by the professor and as described in this syllabus. If you are unsure whether you are using AI ethically, consult your professor for guidance.

Accessibility and Inclusive Language

- Students with formal accommodation needs should contact the Office of Accessibility Resources and Services at OARS@njit.edu.
- Use inclusive, reader-focused language to build community and avoid alienating others. Guidance on gender-neutral language is available from NCTE.

Support and Self-Care

NJIT's Counseling Services offer resources for managing personal and academic challenges. Contact (973) 596-3414 or counseling@njit.edu for assistance.

Tips for Success

- **Start Early**: Projects in this class have hard deadlines, but they are independent of each other. Begin working on them as soon as possible. Early starts give you time to refine your work and address challenges.
- **Plan Ahead**: Use a calendar or planner to map out deadlines and milestones for your projects. Break tasks into smaller steps and set personal deadlines to stay on track.

- **Utilize Office Hours**: Your instructor is available to help you succeed. Use office hours to ask questions, get feedback, and clarify project requirements.
- **Collaborate with Peers**: Discuss ideas and challenges with classmates. Peer feedback can offer new perspectives and help improve your work.
- **Leverage Campus Resources**:
    - **Writing Center**: Get assistance with drafts, organization, and clarity.
    - **Library**: Access resources for research and examples of technical writing.
    - **Career Center**: Seek advice on creating professional documents like resumes and reports.
- **Use AI Tools Responsibly**: AI tools can assist with brainstorming, grammar checking, and generating ideas. However, you must always cite AI-generated content and ensure it enhances, rather than replaces, your original work.
- **Revise and Edit**: Strong technical writing requires revision. Always proofread your drafts for grammar, formatting, and clarity. Tools like Grammarly can be helpful, but human review is essential.
- **Ask Questions**: If you're unsure about an assignment or concept, don't hesitate to ask for clarification. It's better to seek help early than risk misunderstanding the requirements.
- **Engage in Class Activities**: Actively participate in discussions, group work, and workshops. They provide valuable insights and skills relevant to your projects.
- **Stay Organized**: Keep all course materials, notes, and drafts well-organized. This will save time when referencing earlier work or preparing for submissions.
- **Be Ethical and Original**: Always cite sources and avoid plagiarism. Ethical practices enhance your credibility as a technical writer.
- **Embrace a Growth Mindset**: View mistakes as learning opportunities. Reflect on feedback and continuously aim to improve your writing skills.
- **Stay Curious**: Explore examples of technical writing in real-world contexts, such as user manuals, scientific papers, or policy documents, to broaden your understanding.

Course Schedule (Abridged)

A detailed week-by-week schedule will be provided on Canvas, outlining readings, assignments, and deadlines.

Date	Week	Category	Details
1/23	1	Topic	Exploring large language models (LLMs) & critical approaches to AI
		Readings	***Open Technical Communications*** Chapter 3. Ethics
		Learning Activities	Icebreaker - Present your partner Review syllabus Discuss assignments Create accounts for AI tools Discuss ethics in writing
		Homework	Finish setting up your AI tools accounts Read the assigned chapters for week 1 and week 2
		Deadlines	Set up all necessary accounts
1/30	2	Topic A	Technical Writing & Rhetorical Analysis
		Readings for Topic A	***Technical Writing Essentials*** Chapter 1. What is technical communication ***Technical Writing Essentials*** Chapter 2. Professional Style ***Open Technical Communications*** Chapter 1. Introduction to Technical Communication
		Topic B	Writing & designing usable and skim-able documents
		Readings for Topic B	***Technical Writing Essentials*** Chapter 3. Document Design ***Open Technical Communications*** Chapter 4. Document Design
		Learning Activities	Icebreaker - Silent line up according to birthday

			Discuss ethics in technical writing in groups and present to the class Explore options for document design Explore professional styles Share how you used any of the AI tools
		Homework	Read the assigned chapters for week 3
		Deadlines	Finish all the readings
2/6	3	Topic	Reader-oriented design for job market materials
		Readings	***Technical Writing Essentials*** Chapter 7. Common Document Types ***Open Technical Communications*** Chapter 2. Applications of Technical Writing
		Learning Activities	Discuss: business correspondence, resume, cover letter Create your resume and cover letter Create LinkedIn profile Share your resume and cover letter with your group in Notebook LM and review your classmates' work Share how you used any of the AI tools
		Homework	Review ***Open Technical Communications*** Chapter 4. Document Design Review ***Open Technical Communications*** Chapter 2: Applications of Technical Writing 2.1: Business Correspondence and Resumes Work on project 1, draft - writing your CV and cover letter Read the assigned chapters for week 4
		Deadlines	Project 1 Draft
2/13	4	Topic	Editing and assessing linguistic choices
		Readings	***Technical Writing Essentials*** Appendices: Academic Writing Basics ***Open Technical Communications***

			Chapter 8. Technical Editing
		Learning Activities	Library Visit - 6 pm in Central Avenue Building - Van Houten Library CAB 2025
		Homework	Discuss how ChatGPT can enhance your resume and cover letter Review Academic Writing Basics Discus Zotero, Statisa, subject related databases, industry reports Complete project 1 and upload in Canvas Read the assigned chapters for week 5
		Deadlines	Project 1 Due
2/20	5	Topic	Communicating novelty, expertise, and credibility in proposals
		Readings	***Open Technical Communications*** Chapter 5. Processes and Guidelines in Technical Writing
		Learning Activities	Icebreaker - Would You Rather Discuss the writing process - focus on: ***Open Technical Communications*** 5.1: Writing Process: From Audience to Rough Draft Share how you used any of the AI tools
		Homework	Read the assigned chapters for week 6
2/27	6	Topic	The Importance of Brevity in Communication: Emails, Executive Summaries, Data Reports
		Readings	***Technical Writing Essentials*** Chapter 4. Teamwork and Communication

		Learning Activities	Discuss ***Technical Writing Essentials***: 7.1 Correspondence: Text Messages, Emails, Memos, and Letters CC BY-SA (Attribution ShareAlike), Netiquette, Texting, Email, Memos, Letters, Image descriptions Share how you used any of the AI tools
		Homework	Read the assigned chapters for week 7

		Deadlines	Project 2 Draft
3/6	7	Topic	Strategies for Accommodating Technical Information for Non-Experts
		Readings	***Open Technical Communications*** Chapter 6. Usability Testing
		Learning Activities	Icebreaker - One Word Story Apply usability tests on different technical materials Share how you used any of the AI tools
		Homework	Read the assigned chapters for week 8
		Deadlines	Project 2 Due
3/13	8	Topic	Designing instructional materials
		Readings	***Technical Writing Essentials*** Chapter 8. Oral and Visual Presentations
		Learning Activities	Share how you used any of the AI tools Discuss presentations and visual aids Possible visit to the RX lab
		Homework	Work on your sides for project 3
3/20	9	Topic	No class meet - Spring Recess
		Homework	Slide Design
		Deadlines	Project 3 Draft
3/27	10	Topic	Proposal Presentations
		Learning Activities	Presentations
		Homework	Read the assigned chapters for week 11
		Deadlines	Project 3 Due

4/3	11	Topic	Social research methods and user-testing
		Readings	***Technical Writing Essentials*** Chapter 5. Conducting Research
		Learning Activities	Share how you used any of the AI tools Discuss citing and documenting – Zotero The use of Hypothes.is for exploring ideas in the scholarly community
		Homework	Read the assigned chapters for week 12
4/10	12	Topic	Synthesizing research as a team
		Readings	***Open Technical Communications*** Chapter 7. Collaborative Writing
		Learning Activities	Discuss the writing process - focus on ***Open Technical Communications*** 5.10: Strategies for Peer-Reviewing and Team Writing Share how you used any of the AI tools
		Homework	Practice for the group conferences Review project 4 draft
		Deadlines	Project 4 Draft
4/17	13	Topic	Group Conferences
		Learning Activities	Group Conferences
		Deadlines	Project 4 Due
4/24	14	Topic	Writing Workshop
		Learning Activities	Engage in peer reviewing. Consult with your professor.
		Homework	Work on the draft for project 5

		Deadlines	Project 5 Draft
5/1	15	Topic	Course Wrap-Up!
		Learning Activities	Share experiences with AI tools in group discussions
		Deadlines	Project 5 Due (Final Exam)

***About This Syllabus**

This syllabus was authored by Dr. Annie Chatterjee. To enhance its clarity, organization, and usability, ChatGPT-4 was utilized for sorting content, improving the flow, making suggestions, and generating tables. All content was created by Dr. Chatterjee and thoroughly reviewed to ensure its accuracy and alignment with the course's objectives and standards.