STEM Students Discover How ETC Courses Build Technical Skills

At Missouri S&T, English and technical communication courses, including those in speech and media studies, connect two worlds that often seem far apart: the humanities and the hard sciences. For STEM students, these courses are more than a graduation requirement. They provide a chance to learn how to communicate complex ideas clearly and effectively, a skill every STEM professional will need throughout their career.

Courses such as SP&MS 1185 Principles of Speech and ENGL 3560 Technical Writing encourage students to think critically about communication and its role in technical professions. Yet opinions among students vary. Some see these courses as essential preparation for the workplace, while others question their value or prefer that they be elective.

Some students admit to feeling nervous or reluctant about taking Principles of Speech, often because public speaking pushes them outside their comfort zones. Logan Bonham, a sophomore in computer engineering, has completed ENGL 1120 Exposition and Argument and ENGL 1160 Writing and Research and will soon take Principles of Speech. “I think speech is a class that no one should have to take,” he said. “Because I took a speech class in high school, and I was really good at giving speeches for that year, and then the year after that, and then I got terrible again.”

Bonham believes that requiring students to take a course they don’t feel they need can discourage them from truly learning or applying what they’re taught. “I feel like people who are taking the class because it’s required will not internalize any of the things they learn or put those skills to further use.” He later stated he would prefer covering English and tech com concepts in his major courses: “I feel like it’d be more beneficial if we could somehow have a constant training.”

Other students take a different view, emphasizing how these courses prepare them for real-world communication. Viktor Butkovich, a senior and graduate-track-pathway student in computer science and applied mathematics, has completed both Technical Writing and Principles of Speech and believes they play an essential role in preparing engineers for real-world communication.

Lucas Navarro (standing), a senior in computer science, and Logan Bonham, a sophomore in computer engineering, work on a writing assignment.

“A big part of communication is knowing your audience, especially for a typical S&T student developing expertise in a technical area,” he said. “You’re obviously going to be working with people like managers and business people and even just people in your personal life, and you’ll have to explain technical concepts in a way people understand. And a lot of times tech students can’t do that.”

Through his internship experiences, Butkovich saw the difference clear communication can make. “Many people struggle with explaining what they’re doing and why. You see a lot of documents that aren’t well written, and people notice. [ETC courses] are actually very helpful, and I think a lot of people underemphasize that, especially computer science people. I notice they complain a lot about the design docs we have to write, but I actually enjoyed writing them.”

He credits these courses with improving his performance in both academic and professional settings. “They’ve helped me with writing papers and giving presentations in both my professional activities and my classes, especially graduate courses that tend to be writing and presentation heavy.”

Steven “Junior” Roemerman, a freshman in civil engineering who completed Principles of Speech in Fall 2025, emphasized the importance of becoming a well-rounded professional. “I think it’s important for civil engineers, or engineers in general, to be well rounded

and have diverse experiences so they can be better people and better engineers." For Roemerman, learning to express ideas effectively is part of developing as both a communicator and an engineer.

Lucas Navarro, a senior in computer science who has taken both Principles of Speech and Technical Writing, expressed a similar belief that these courses enrich the university experience.

"People who come to college just to get a single skill set are doing it wrong. It's a university; it's about all the knowledge. Missing out on something, not getting a full education, means getting a less valuable education."

Across these perspectives, a shared message emerges: technical communication matters, both in writing and speaking. Some students discover that value reluctantly, while others embrace it early, but all recognize its impact on teamwork, professional confidence, and the ability to share ideas effectively.

For STEM students, mastering these skills means more than passing a class; it's about learning to speak and write in ways that make their expertise accessible. The English and Technical Communication Department provides that opportunity, and students gain as much from these experiences as the effort they put in.

MS in Technical Communication Undergoes Major Revision

A team of professors in the ETC department is collaborating on a major revision of the Master of Science in Technical Communication. The goal is to better align the degree with today's job market and attract more self-funded students, including working professionals. Over the next year and a half, the department plans to develop new courses, revise existing ones, and significantly change the structure of the program.

"We plan for the program to be online-only and asynchronous," said Dr. David Wright, professor of technical communication. "Ideally, that transition will be completed in about a year and a half. We'll be developing courses in the meantime; some will be new, and others will be updated versions of current classes."

Asynchronous courses allow students to watch lectures, read materials, and complete assignments on their own schedules, though deadlines still apply.

The revised structure will also shift away from the traditional 16-week semester. Now that the department no longer offers graduate teaching assistantships, the M.S. will move entirely to eight-week asynchronous courses.

"The plan is eight-week courses because we are looking to target a more working-professional crowd," Wright said. "People who are working would much rather do one eight-week course and then another in the same semester, rather than manage two 16-week courses at once."

Courses already in development include User Experience and Interface Design, Persuasive AI, and Technology and Humanity. The full revision of the curriculum is expected to be completed by May 2027. The updated program is expected to debut in Fall 2027 with a new name that more clearly reflects its content and goals.

Dr. David Wright

In the meantime, the department must continue to offer in-person or blended course sections until the last on-campus international student graduates. Federal regulations restrict international students in the U.S. from taking more than one fully online course per semester.

"If you look at the types of jobs that are being advertised, we really feel like we owe it to students," Wright said. "You want them to have the right skills to match up with the jobs that are out there now."

In 2023–2025, the department developed a proposal for a PhD program in technical communication (see the Spring 2024 issue of *Panoply*), but the proposal was rejected by the S&T administration due to cost considerations.

Missouri S&T's MS in Technical Communication was launched in January 2005. As of December 2025, 112 students have graduated from the program, including 53 international, 10 graduate track pathway, and 5 distance education. Over 70 percent of program alumni are women.