

# TECHNICAL COMMUNICATION

At the graduate level, three technical communication programs are offered in the department of English and technical communication: a master of science in technical communication, a graduate minor in technical communication, and a graduate certificate in technical communication.

The English and technical communication department offers a master’s degree in technical communication (either online or traditional) for any student with a bachelor’s degree in any discipline and a strong background in writing and technology. Because of the rapid changes in technology, particularly due to the effects of information systems, there is an immediate and growing need for highly trained professional communicators to design information. Employers are looking for communicators with sophisticated skills in the integration of visual communication tools with written and spoken communication.

Faculty involved in a variety of technical communication research projects teach and direct the program. Students will have opportunities to assist these faculty, both in research and teaching, as well as to work alongside faculty and graduate students in engineering and science. The technical communication faculty and students are active in the leading professional societies.

The program requires a minimum of 30 hours of graduate credit and includes both a thesis and non-thesis option.

## M.S. Degree Requirements

This MS degree has a non-thesis option (at least 30 credit hours) and a thesis option (at least 33 credit hours).

**Non-thesis:** The student must complete TCH COM 6600 Foundations of Technical Communication (3 credit hours) and nine more courses (27 credit hours) from the list below. A minimum of 9 credit hours must be courses at the 6000-level.

**Thesis:** The student must complete TCH COM 6600 Foundations of Technical Communication (3 credit hours), TCH COM 5099 (6 credit hours), and seven more courses (24 credit hours) from the list below. A minimum of 6 credit hours must be courses at the 6000-level. The student must also write and defend a thesis as part of the work for TCH COM 5099.

TCH COM 5001	Special Topics	0-6
TCH COM 5510	Technical Editing	3
TCH COM 5520	Help Authoring	3
TCH COM 5530	Usability Studies	3
TCH COM 5540	Advanced Layout and Design	3
TCH COM 5550	Advanced Proposal Writing	3
TCH COM 5560	Web-Based Communication	3
TCH COM 5610	History of Technical Communication	3
TCH COM 5620	Research Methods in Technical Communication	3
TCH COM 6001	Special Topics	0-6
TCH COM 6070	Teaching of Technical Communication	3
TCH COM 6410	Theoretical Approaches to Technical Communication	3
TCH COM 6420	Project Management in Technical Communication	3
TCH COM 6440	Advanced Theories of Visual Technical Communication	3
TCH COM 6450	Advanced International Technical Communication	3

## Technical Communication Graduate Minor

The technical communication program offers a graduate-level minor that is open to any graduate student. The minor is designed to strengthen the written, oral, and visual communication skills of students majoring in the sciences, engineering, management, information systems, or other fields. The minor will be particularly useful for those students who will pursue the “paper option” thesis or dissertation. The minor will also be beneficial for those students who will make oral or poster presentations at technical conferences, write journal articles, prepare research proposals, design technical web pages, or prepare technical marketing information.

The program requires a minimum of 12 hours of credit (excluding all courses taken for undergraduate credit). A minimum of 6 hours of 4000-level or above courses with the TCH COM designation is required. At least 6 additional hours of technical communication intensive courses are required. The additional courses may come from courses with the TCH COM designation, the list of approved technical communication intensive courses, and/or technical communication intensive courses from any academic discipline with the approval of the minor advisor and the English and technical communication department.

Students can elect to pursue this minor at any point during their graduate studies by submitting the Application for a Designated Graduate Minor form (available at <http://registrar.mst.edu/media/administrative/registrar/documents/gradminorapp.pdf>) to the English and technical communication department. Upon application, each student will be assigned a minor advisor who will work with the student to develop a proposed list of courses to fulfill the program requirements.

## Approved Technical Communication Intensive Courses

All TCH COM courses, 4000-level and above

BIO SCI 6313	Environmental Microbiology	3
BUS 5111	Business Negotiations	3
ENGLISH 2410	Theory Of Written Communication	3
ENGLISH 5571	Advanced Writing For Science & Engineering	3
GEO ENG 5092	International Engineering and Design	3
IS&T 6887	Research Methods in Business and IS&T	3
MATH 3109	Foundations Of Mathematics	3
MATH 5603	Methods of Applied Mathematics	3
MATH 5108	Linear Algebra II	3
MATH 5154	Mathematical Logic I	3
MS&E 6120	Thermodynamics and Phase Equilibria	3

The technical Communication Graduate Minor Advisory Committee will evaluate other courses, upon the request of students or faculty, for inclusion on the approved list or on a case-by-case basis for individual programs.

## Professional Communication Graduate Certificate

The graduate certificate in professional communication serves current Missouri S&T graduate students in any discipline; individuals who already have undergraduate or graduate degrees and are seeking to add value to their degrees; and current industry employees who need to hone their

communication skills to remain competitive in the market and better serve their employers.

The certificate may be pursued either online or on campus.

The following 4 courses\* (totaling 12 credit hours) will be required for the certificate:

TCH COM 5510	Technical Editing
TCH COM 5530	Usability Studies
TCH COM 5550	Advanced Proposal Writing
TCH COM 5560	Web-Based Communication

These four courses also count for the M.S. in technical communication and could be applied toward that degree if the certificate student pursued the M.S. subsequently or at the same time.

\* Course substitutions may be permitted by the department in some circumstances.

**Ryan Cheek**, Assistant Professor  
PHD Utah State University

**Carleigh Davis**, Assistant Professor  
PHD East Carolina University

**Edward A. Malone**, Professor  
PHD Southern Illinois University Carbondale

**Kathryn Michele Northcut**, Professor  
PHD Texas Tech University

**Michael David Wright**, Professor  
PHD Oklahoma State University Main

**TCH COM 5000 Special Problems** (IND 0.0-6.0)  
Problems or readings on specific subjects or projects in the department. Consent of instructor required.

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**TCH COM 5001 Special Topics** (LEC 0.0-6.0)  
This course is designed to give the department an opportunity to test a new course. Variable title.

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**TCH COM 5010 Seminar** (RSD 0.0-6.0)  
Discussion of current topics. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5040 Oral Examination** (IND 0.0)  
After completion of all other program requirements, oral examinations for on-campus M.S./Ph.D. students may be processed during intersession. Off-campus M.S. students must be enrolled in oral examination and must have paid an oral examination fee at the time of the defense/comprehensive examination (oral/written). All other students must enroll for credit commensurate with uses made of facilities and/or faculties. In no case shall this be for less than three (3) semester hours for resident students.

**TCH COM 5085 Internship** (IND 0.0-6.0)  
Internship will involve students applying critical thinking skills and discipline specific knowledge in a work setting based on a project designed by the advisor and employee. Activities will vary depending on the student's background and the setting. The course may be taken for undergraduate credit and/or graduate credit for up to 6 hours total. Prerequisites: Must have completed 24 hours in the major core curriculum.

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**TCH COM 5099 Research** (IND 0.0-15)  
Investigations of an advanced nature leading to the preparation of a thesis or dissertation. Consent of instructor required.

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**TCH COM 5510 Technical Editing** (LEC 3.0)  
The principles and practices of technical editing, including usability, audience analysis, contextual editing, the conventions of scientific and technical communication, and the role of the editor in document development and publication. Students will also learn standard practices of copy editing and the use of style guides. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5520 Help Authoring** (LEC 3.0)  
Students will acquire the technological and rhetorical skills necessary for creating effective online help systems, including context-sensitive help for computer applications. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5530 Usability Studies** (LEC 3.0)  
Students in this course will study and apply methods used by technical communicators to evaluate usability. Students will study methods used to evaluate human interaction with communication tools and how to make those products more suitable for human use. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5540 Advanced Layout and Design** (LEC 3.0)  
Advanced theory and practice of layout and design for print and electronic media. Prerequisite: English 2540 or TCH COM 2540, or graduate standing.

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**TCH COM 5550 Advanced Proposal Writing** (LEC 3.0)  
Familiarizes graduate students with many aspects of writing proposals for various purposes in academic, professional, and public spheres. Offers opportunities to write documents to promote their academic, professional, or personal goals or those of their organization(s). Credit will not be given for both TCH COM 4550 and TCH COM 5550. Prerequisites: Graduate standing.

**TCH COM 5560 Web-Based Communication** (LEC 3.0)

Covers such topics as advanced writing and editing for the web; the creation of rhetorically effective websites; the use of blogs, wikis, and other web genres to communicate technical information. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5610 History of Technical Communication** (LEC 3.0)

Introduction to the roles of the technical communicator and the technologies of communication from ancient cultures to the present. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 5620 Research Methods in Technical Communication** (LEC 3.0)

Students learn essential research methods in technical communication, including audience analysis, interviewing techniques, working with subject matter experts, and experimental research design. Prerequisites: One semester of college composition or technical writing, or graduate standing.

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**TCH COM 6001 Special Topics** (LEC 0.0-6.0)

This course is designed to give the department an opportunity to test a new course. Variable title.

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**TCH COM 6070 Teaching of Technical Communication** (LEC 3.0)

Provides a theoretical and pedagogical foundation for teaching workshops and undergraduate courses in technical communication. Includes both traditional and electronic settings.

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**TCH COM 6410 Theoretical Approaches to Technical Communication** (LEC 3.0)

Examines representative theories and research in written, oral, and visual modes of technical communication. Includes such issues as ethics, document design, rhetorical methods, and people-machine communication.

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**TCH COM 6420 Project Management in Technical Communication** (LEC 3.0)

Study of and practice in directing projects related to such areas as multimedia, web sites, strategic planning, newsletters. Includes writing planning documents, selecting team members, synchronizing assignments, testing prototypes, and issuing a final report.

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**TCH COM 6440 Advanced Theories of Visual Technical Communication** (LEC 3.0)

An in-depth investigation and analysis of historical and contemporary visual theories and their impact on technical communication, including visual rhetoric, semiotics, and design and critical theories.

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**TCH COM 6450 Advanced International Technical Communication** (LEC 3.0)

Advanced study of international technical communication. Includes topics such as graphics, icons, symbols; user interface design; intercultural communication. Students may not earn credit for both TCH COM 4450 and TCH COM 6450.

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**TCH COM 6600 Foundations of Technical Communication** (LEC 3.0)

Introduction to themes and issues, methods, and genres that define technical communication.

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