TECHNICAL COMMUNICATION

The technical communication program offers an M.S. degree (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 programs 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

The following 10 courses (totaling 30 credit hours) are required for the M.S.:

- TCH COM 5620 Research Methods in Technical Communication 3
- TCH COM 4520 Help Authoring 3
- TCH COM 5510 Technical Editing 3
- TCH COM 5530 Usability Studies 3
- TCH COM 5610 History of Technical Communication 3
- TCH COM 6600 Foundations of Technical Communication 3
- TCH COM 5560 Web-Based Communication 3
- TCH COM 6440 Advanced Theories of Visual Technical Communication 3
- TCH COM 6450 Advanced International Technical Communication 3
- TCH COM 5550 Advanced Proposal Writing 3

Total Credits 30

A student completing the master’s degree will also take a comprehensive exam during his/her final semester. If the student chooses to do a thesis instead of the exam, and the technical communication faculty give their approval to this plan, the student will have to take 6 hours of TCH COM 5099 Research in addition to the above 10-course sequence.

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

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>BIO SCI 6313</td>
<td>Environmental Microbiology</td>
<td>3</td>
</tr>
<tr>
<td>BUS 4111</td>
<td>Business Negotiations</td>
<td>3</td>
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<tr>
<td>ENGLISH 2410</td>
<td>Theory Of Written Communication</td>
<td>3</td>
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<tr>
<td>ENGLISH 5571</td>
<td>Advanced Writing For Science &amp; Engineering</td>
<td>3</td>
</tr>
<tr>
<td>GEO ENG 5092</td>
<td>International Engineering and Design</td>
<td>3</td>
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<tr>
<td>IS&amp;T 6887</td>
<td>Research Methods in Business and IS&amp;T</td>
<td>3</td>
</tr>
<tr>
<td>MATH 3109</td>
<td>Foundations Of Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 5603</td>
<td>Methods of Applied Mathematics</td>
<td>3</td>
</tr>
<tr>
<td>MATH 5108</td>
<td>Linear Algebra II</td>
<td>3</td>
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<tr>
<td>MATH 5154</td>
<td>Mathematical Logic I</td>
<td>3</td>
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<tr>
<td>MS&amp;E 6120</td>
<td>Thermodynamics and Phase Equilibria</td>
<td>3</td>
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</table>

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.

The graduate certificate in technical 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 are also required for the M.S. in technical communication and could be counted toward that degree if the certificate student later decided to go on for the M.S.

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

Ed A. Malone, Professor
PHD Southern Illinois University Carbondale
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.

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.

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.

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

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.

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.

TCH COM 5540 Advanced Layout and Design (LEC 3.0) Advanced theory and practice of layout and design for print and electronic media. Students who have taken TCH COM 2540 may not take this course for credit. Prerequisite: Graduate standing.

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.

TCH COM 5570 Teaching of 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.

TCH COM 5580 Communication Management (LEC 3.0) Advanced study of international technical communication. Includes topics such as graphics, icons, symbols; user interface design; intercultural communication. Requires field work at student's expense. Students may not earn credit for both TCH COM 4580 and TCH COM 6580. Prerequisite: Graduate Standing.

TCH COM 5590 Foundations 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.

TCH COM 5610 History of 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.

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.

TCH COM 5640 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.

TCH COM 5650 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. Requires field work at student's expense. Students may not earn credit for both TCH COM 4650 and TCH COM 6650. Prerequisite: Graduate Standing.