
Writing, Rhetoric and Technical Communication

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Professors

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Admission

In addition to satisfying all admission requirements of the JMU graduate school, applicants must submit to the graduate coordinator an application dossier that includes the following documents:

- A background and goals statement that explains how the Master of Arts or Master of Science program relates to the applicant's prior experience and how it fits into his or her long-range professional goals.
- Three letters of recommendation from people who can comment on the applicant's academic preparation and professional experience.
- 20-30 pages of writing samples from academia or the professions.

Nonnative speakers of English must take the Test of English as a Foreign Language and receive a score of at least 550. Applicants may use the letters of recommendation and writing samples to support an application for financial aid.

Admission may begin the fall semester. To receive full consideration for admission into the programs as well as for financial aid, students should submit their application packages to The Graduate School by May 31 for fall semester.

Students may apply online to The Graduate School at <http://www.jmu.edu/grad/prospective> and apply for assistantships through JMU Joblink at <http://joblink.jmu.edu>.

Mission

The School of Writing, Rhetoric and Technical Communication offers programs that combine training and education to prepare students for information management.

The central mission of the programs is to enable graduates to grow as professionals and, ultimately, to contribute to the developing field of technical and scientific communication.

Through a blend of course offerings and internship programs, the Master of Arts and Master of Science programs in technical and scientific communication seek to provide students with communication skills and training that will enable them to build productive careers in industry or academia. They also introduce students to the most current communication technologies used to produce documents of professional quality not only during their studies at James Madison University but also throughout their careers. Finally, students learn the kinds of communication, analytical and reasoning skills that will allow them to become leaders in their fields.

The specific goals of the Master of Arts and Master of Science degrees are to help students to

- define what effective communication means in technical and scientific environments.
- enhance their understanding of how and why communication works.
- learn how to identify and eliminate barriers to effective communication.
- improve the efficiency and effectiveness of their communication management.
- develop research skills.
- create for themselves a cognate area of study within the scientific or technical field in which they intend to work as professional technical communicators.

To achieve these goals, the programs combine work in theory, writing, text design, and analysis of communication systems and contexts to help students to acquire the knowledge and skills needed to begin careers in technical or scientific communication. The programs emphasize scholarly, humanistic and social scientific perspectives on the function and application of technical and scientific communication.

Consequently, the programs provide students with not only the knowledge and skills required for careers in industry, business or government but also the research skills and communication theory that will prepare them for doctoral study in communication and rhetoric. The long-range goal of the Master of Arts and Master of Science degrees, then, is to enable program graduates to grow as professionals and, ultimately, to contribute to the developing field of technical and scientific communication.

While studies in both programs provide students with a sound foundation in writing, editing and document production, the Master of Arts degree typically attracts students with undergraduate work centered in the humanities. Although these students often supplement their TSC degree plan with courses in the sciences, they are primarily interested in gaining extensive knowledge and practice in writing and editing skills that are not tied to a single technical or scientific field but, rather, are applicable to multiple technical or scientific areas.

Conversely, the Master of Science degree plan of study typically proves attractive to students who want to complement their undergraduate degrees in the sciences with advanced training in communication within their fields. Such complementary training in technical and scientific communication enables Master of Science graduates not only to perform more effectively as technicians or scientists but also to move laterally into writing, editing or production positions or vertically into management positions.

Degree candidates must successfully complete a minimum of 36 credit hours of graduate course work, which includes a minimum of two semesters of course work completed at JMU. Students work with department advisers to design a program that fits their unique educational needs and career aspirations. Depending on their backgrounds and options they might choose to pursue while in the degree program, students may decide to take course work beyond the required 36 hours to obtain additional knowledge or skills in specialized areas. For example, students may choose to take extra course work to enhance their skills in communication technologies or to deepen their academic training in the technical or scientific content areas in which they intend to work as professional writers or editors.

Language Requirement

The Master of Arts and Master of Science programs require that the candidate demonstrate graduate-level proficiency in foreign language, statistics or computer programming in one of following ways:

- Completing the second year of a college course in a modern foreign language with a grade of "C" or above, or completion of the foreign language placement exam administered by the Department of Foreign Languages, Literatures and Cultures with a placement into the junior level of the language.
- Completing an approved graduate statistics or computer programming course (or equivalent) with a grade of "B" or better.
- Receiving a waiver from the department of its foreign language examination or the required statistics or computing course work based on the student's extensive language background in one of those areas.

A student should state in his or her plan of study the means by which he or she has already satisfied or plans to satisfy the language requirement. A degree candidate must complete the language requirement before taking the comprehensive exams.

Degree Requirements

Students in the Master of Arts program must successfully complete three core courses (nine credit hours), a technical communication internship (three credit hours), two courses of thesis hours (six credit hours), and six courses of TSC electives (18 credit hours).

Students in the Master of Science program must successfully complete three core courses (nine credit hours), a technical communication internship (three credit hours), two courses of thesis hours (six credit hours), three courses in an approved technical or scientific cognate discipline (nine credit hours), and three courses of TSC electives (nine credit hours).

At least half of the student's elective credit hours must come from course work at the 600 level. Up to six of those hours may be TSC 700, Thesis or TSC 701, Practicum. Students may take courses at the 700 level to satisfy the remainder of their electives requirement. Students who have obtained substantial work-world experience in designing, writing or producing documentation in technical or scientific fields may request credit for and waiver of course work, the internship or thesis.

Cognate Disciplines

To be competitive in many of today's scientific or technical disciplines, technical communicators must possess substantial knowledge of the scientific or technical field in which they are working. Through the TSC Master of Science program, students have the opportunity to gain that scientific or technical background while refining their skills as technical communicators.

Master of Science candidates must successfully complete at least nine credit hours of course work at the graduate level in an approved technical or scientific cognate discipline: biology, chemistry, communication sciences and disorders, computer science, dietetics, geography, geology, health sciences, integrated science and technology, kinesiology, mathematics, medical technology, nursing, physics, or psychology. Master of Arts candidates are also encouraged to gain competence in a technical or scientific area before entering the professions. The advanced proficiency gained by the student in the selected cognate area will complement the student's education in TSC course work.

For approval to begin study in a chosen cognate discipline, Master of Science students should already possess a Bachelor of Science or comparable work-world experience in the proposed technical or scientific field and seek approval to enroll in cognate course work from the cognate discipline department and the TSC graduate coordinator. Students who want to take course work in a cognate discipline that does not currently offer graduate studies may do so through independent studies with graduate faculty in the chosen field, distance learning with graduate programs at other accredited colleges or universities or graduate courses available through the College of Integrated Science and Technology. Independent studies with faculty in a cognate discipline department must be approved by the head of that department and by the TSC graduate coordinator.

When transferring credit from other universities or receiving studies through distance learning, students should remember that The Graduate School allows up to nine credit hours of transferred course work from institutions other than JMU to count toward a student's graduate degree at JMU.

Thesis/Practicum

Degree candidates have two options for satisfying the thesis requirement for the Master of Arts or Master of Science degree:

- Complete a traditional research-based master's thesis on a technical communication topic.
- Complete a practicum that results in a work-world document (e.g., an online or bound computer tutorial, a user manual or a procedures manual).

It is important that the student understand that he/she is solely responsible for the success of the thesis/practicum. The student needs to be in charge of completing all paperwork for the school, The Graduate School, registrar, etc., and for meeting all deadlines to matriculate successfully. The student will need to contact these offices well ahead of the semester in which he/she plans to graduate to ensure that all deadlines can and will be met.

Master of Arts Degree Requirements

Course Requirements

Credit Hours

Choose one of the following:	3
TSC 510. Seminar in Technical and Scientific Communication	
TSC 520. Technical and Scientific Communication for Nonnative Speakers of English	
TSC 530. Research Methods in Technical and Scientific Communication	3
TSC 540. Technical and Scientific Editing	3
TSC 695. Internship in Technical and Scientific Communication	3
Thesis or Practicum	6
TSC 700. Thesis	
TSC 701. Practicum	
Choose at least six of the following:	18
TSC 545. Ethical and Legal Issues in Technical and Scientific Communication	
TSC 550. Organizational Communication	
TSC 555. Managerial Communication	
TSC 560. Scientific Rhetoric	
TSC 570. Rhetorical Theory: Classical Through Renaissance	
TSC 580. Rhetorical Theory: Enlightenment through Contemporary	
TSC 590. Intercultural Technical Communication	
TSC 610. Publication Management	
TSC 615. Document Design	
TSC 620. Science Writing	
TSC 625. Government Writing	
TSC 630. Legal Writing	
TSC 635. Medical Writing	
TSC 640. Proposal and Grant Writing	
TSC 645. Documentation of Computer Technologies	

TSC 650. Electronic and Online Publication	
TSC 655. Electronic Graphic Design	
TSC 670. Teaching Technical and Scientific Communication	
TSC 680. Readings in Technical and Scientific Communication	
TSC 690. Special Issues in Technical and Scientific Communication	

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Master of Science Degree Requirements

Course Requirements

Credit Hours

Choose one of the following:	3
TSC 510. Seminar in Technical and Scientific Communication	
TSC 520. Technical and Scientific Communication for Nonnative Speakers of English	
TSC 530. Research Methods in Technical and Scientific Professional Communication	3
TSC 540. Technical and Scientific Editing	3
TSC 695. Internship in Technical and Scientific Communication	3
Thesis or Practicum	6
TSC 700. Thesis	
TSC 701. Practicum	
Cognate discipline courses ¹	9
Choose at least three of the following:	9
TSC 545. Ethical and Legal Issues in Technical and Scientific Communication	
TSC 550. Organizational Communication	
TSC 555. Managerial Communication	
TSC 560. Scientific Rhetoric	
TSC 570. Rhetorical Theory: Classical Through Renaissance	
TSC 580. Rhetorical Theory: Enlightenment through Contemporary	
TSC 590. Intercultural Technical Communication	
TSC 610. Publication Management	
TSC 615. Document Design	
TSC 620. Science Writing	
TSC 625. Government Writing	
TSC 630. Legal Writing	
TSC 635. Medical Writing	
TSC 640. Proposal and Grant Writing	
TSC 645. Documentation of Computer Technologies	
TSC 650. Electronic and Online Publication	
TSC 655. Electronic Graphic Design	
TSC 670. Teaching Technical and Scientific Communication	
TSC 680. Readings in Technical and Scientific Communication	
TSC 690. Special Issues in Technical and Scientific Communication	

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¹ Master of Science candidates must choose a cognate discipline from the following: biology, chemistry, communication sciences and disorders, computer science, dietetics, geography, geology, health sciences, integrated science and technology, kinesiology, mathematics, medical technology, nursing, physics, or psychology.

Course Offerings

Technical and Scientific Communication

TSC 510. Seminar in Technical and Scientific Communication. 3 credits.

A foundations course. The study of the theories and history of technical and scientific communication and its major figures and issues. Introduces students to foundational texts in the field.

TSC 520. Technical and Scientific Communication for Nonnative Speakers of English. 3 credits.

Study of theory, history and research in the field as well as extensive practice in designing, writing, revising and producing documents central to technical communication, including technical summaries, definitions, mechanism descriptions, process or procedure descriptions, proposals, reports and manuals. Emphasizes common problems confronted by technical communicators who are not native speakers of English, including organization, style, paragraphing, grammar, usage, punctuation and idiomatic language.

TSC 530. Research Methods in Technical and Scientific Communication. 3 credits.

Advanced study of research methodology used in technical and scientific communication, covering techniques for collecting information or data through primary and secondary research. Emphasizes extended bibliographic research through projects that employ conventional bound texts as well as electronic texts, including CD-ROM and the Internet. *Prerequisite: TSC 510 (or TSC 520), or TSC 510 and TSC 530 may be taken concurrently.*

TSC 540. Technical and Scientific Editing. 3 credits.

Advanced study of and practice in the central editorial duties of managing a document through the editorial process, including establishing the need, purpose and scope of a document; developing levels of edit; copyediting; substantive editing; determining document design; editing graphic aids; collaborating with authors; and proofreading. *Prerequisite: TSC 530 or permission of instructor.*

TSC 545. Ethical and Legal Issues in Technical and Scientific Communication. 3 credits.

Advanced study of the ethical and legal issues confronted by technical communicators in a range of fields. Examines the role of ethics in the field, the nexus of ethics and the law, ethical theories and critical thinking in moral reasoning, falsification of information or data in written or graphic form, ownership of information, confidentiality, copyright and trademark laws, conflicts of interest, and causes of unethical behavior. *Prerequisite: TSC 530 or permission of instructor.*

TSC 550. Organizational Communication. 3 credits.

Advanced study of the structure of communication in organizations by exploring formal and informal communication systems in government, industry and business. Examines the role of communication in the social construction of organizations with hierarchical and nontraditional structures. *Prerequisite: TSC 530 or permission of instructor.*

TSC 555. Managerial Communication. 3 credits.

Advanced study of how managers communicate in organizations by examining the various forms, contexts and functions of managerial written and verbal communication. Emphasizes the role of communication in management and the rhetorical guidelines followed by effective managers to design, write, revise and produce clear, concise and persuasive documents. *Prerequisite: TSC 530 or permission of instructor.*

TSC 560. Scientific Rhetoric. 3 credits.

Study of how writers and editors in technical and scientific communication structure language in communicating scientific knowledge and in presenting and defending a position. Examines theoretical approaches to the uses of language in science and technology within specialized disciplines, industrial organizations, and social and cultural settings as well as critical approaches to the works of figures such as Isaac Newton, Charles Darwin, James D. Watson, Francis Crick and Stephen Jay Gould. *Prerequisite: TSC 530 or permission of instructor.*

TSC 570. Rhetorical Theory: Classical Through Renaissance. 3 credits.

Study of classical rhetoric with an emphasis on the use of language as a means of winning the assent sympathy or cooperation of an audience. Examines the rhetorical theories of figures such as Gorgias, Isocrates, Plato, Aristotle, Cicero, Quintilian and Saint Augustine. *Prerequisite: TSC 530 or permission of instructor.*

TSC 580. Rhetorical Theory: Enlightenment Through Contemporary. 3 credits.

Study of modern rhetoric with an emphasis on the use of language as a means of generating knowledge and of understanding, establishing and maintaining human communities. The course examines the rhetorical theories of figures such as Francis Bacon, George Campbell, Richard Whately, Kenneth Burke, C. Perelman, L. Olbrechts-Tyteca and Michel Foucault. *Prerequisite: TSC 530 or permission of instructor.*

TSC 590. Intercultural Technical and Scientific Communication. 3 credits.

Study of technical and scientific communication in a variety of cultural and international settings and contexts. Emphasizes strategies for understanding and developing analytical skills needed to collaborate with or communicate to people with varied racial, ethnic or cultural backgrounds in both domestic and international settings. *Prerequisite: TSC 530 or permission of instructor.*

TSC 610. Publication Management. 3 credits.

Advanced study of the management and editorial policy of academic and professional publications. Examines such managerial and editorial responsibilities as defining editorial policy, choosing a management hierarchy, defining management roles, reviewing and editing submissions for publication, and collaborating with authors. *Prerequisites: TSC 530 and TSC 540, or permission of instructor.*

TSC 615. Document Design. 3 credits.

Advanced study of the document production process, including such design and production processes as creating publication designs, determining publication format and layout for a range of documents (e.g., brochures, newsletters, journals, and books), manipulating text and graphics using desktop publishing software, proofreading galley and page proofs, and submitting final drafts through electronic prepress to printer. *Prerequisites: TSC 530 and TSC 540, or permission of instructor.*

TSC 620. Science Writing. 3 credits.

Advanced writing course that examines the writing, editing and producing of scientific documents including manuals, research reports, conference papers and journal articles. Emphasizes the process of submitting manuscripts for publication to professional and academic science journals, magazines and newspapers and also reviews methods for creating finished, publishable articles about new research, theories, projects, trends and personalities in science and technology. *Prerequisites: TSC 530 and TSC 540, or permission of instructor.*

TSC 625. Government Writing. 3 credits.

Advanced study of writing genres from a variety of fields within government. Examines the purposes, audiences and formats unique to government publications. Directs students in writing original and editing existing government documents. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 630. Legal Writing. 3 credits.

Advanced study of central components of legal writing such as legal analysis, representation of facts and evidence, reasoning, logic, and argumentation. Addresses such key rhetorical elements of legal documents as clarity and conciseness of style, level of diction, jargon, passive voice and errors in person. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 635. Medical Writing. 3 credits.

Advanced study of the theory and practice of writing in medical/health-related fields. Examines the kinds of documentation written about medical practices for nontechnical audiences (patients and their families). Emphasizes communication between medical professionals and patients. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 640. Proposal and Grant Writing. 3 credits.

Advanced study of the planning and writing of proposals and grants with emphasis on research proposals and grants seeking funding from industry and government. Covers key proposal components including the executive summary, purpose and scope, problem definition, need, methodology, project feasibility, facility requirements, personnel qualifications, cost, and proposal presentation. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 645. Documentation of Computer Technologies. 3 credits.

Advanced study of theory and practice in designing, writing and producing computer documentation for end users. Emphasizes documentation design and production, online documentation, usability testing, and writing of user's guide for computer hardware and software. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 650. Electronic and Online Publication. 3 credits.

Advanced study of electronic and online publications, including World Wide Web pages, electronic newsletters and magazines, and online help. Emphasizes principles in designing, writing and producing publications using such current authoring tools as the hypertext mark-up language, HTML. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 655. Electronic Graphic Design. 3 credits.

Advanced study of the theoretical and practical use of computer graphics as a form of visual communication in scientific or technical documents. Examines topics such as visual perception, design theory, formatted text and graphics, color and design concepts, animation, and video. Emphasizes the development of technical skills in manipulating electronically generated text and graphics. *Prerequisites:* TSC 530 and TSC 540, or permission of instructor.

TSC 670. Teaching Technical and Scientific Communication. 3 credits.

Preparation of TSC teaching assistants in rhetorical theory and teaching methodologies. Emphasizes pedagogical strategies central to teaching effective written and oral communication in the field and provides practice in course development and assessment under the guidance of a faculty mentor in actual course situations. Required of all teaching assistants before their first semester teaching. *Prerequisites:* TSC 530, TSC 540 and permission of instructor.

TSC 680. Readings in Technical and Scientific Communication. 3 credits.

Faculty-supervised reading, research and writing on advanced technical and scientific communication projects not covered in regularly scheduled courses. *Prerequisites:* TSC 530, TSC 540, permission of instructor, and completion of 18 or more credit hours in the major. May be repeated with different content and permission of director.

TSC 690. Special Issues in Technical and Scientific Communication. 3 credits.

Advanced writing and research in a variety of technical communication genres, including government writing, medical writing, legal writing, and proposal and grant writing. Examines special and timely issues currently being explored in technical and scientific communication not addressed in sufficient depth in regularly scheduled TSC courses. *Prerequisites:* TSC 530 and TSC 540. May be repeated with different course content and permission of director.

TSC 695. Internship in Technical and Scientific Communication. 3 credits.

Work-world experience within business, industry, government or academia in technical and scientific communication. Designed to allow students to incorporate field experience with TSC course work and to observe communication processes and apply effective written, interpersonal and public communication skills. *Prerequisites:* TSC 530, TSC 540 and permission of internship coordinator. May not be repeated.

TSC 699. Thesis/Practicum Continuance. 2 credits.

Individual reading, research and writing associated with completion of major's thesis/practicum portfolio. Directed by the chair of the student's thesis/practicum committee and required for graduation. *Prerequisites:* TSC 510, TSC 530, TSC 540, successful completion of the comprehensive exam, and permission of thesis/practicum committee director. Students who have registered for six hours of thesis/practicum credit but have not finished the thesis/practicum must be enrolled in this course each semester until the thesis/practicum is completed. This course is graded on a satisfactory/unsatisfactory (S/U) basis.

TSC 700. Thesis. 6 credits.

Individual reading, research and writing associated with completion of major's thesis. Supervised by the director of the student's thesis committee. Student must complete six hours of thesis research to graduate. *Prerequisites:* TSC 530, TSC 540 and permission of thesis committee director. Credit hours may be taken over one or two semesters.

TSC 701. Practicum. 6 credits.

Individual reading, research and writing associated with completion of major's practicum. Supervised by the director of the student's practicum committee. Student must complete six hours of practicum research to graduate. *Prerequisites:* TSC 530, TSC 540 and permission of practicum committee director. Credit hours may be taken over one or two semesters.