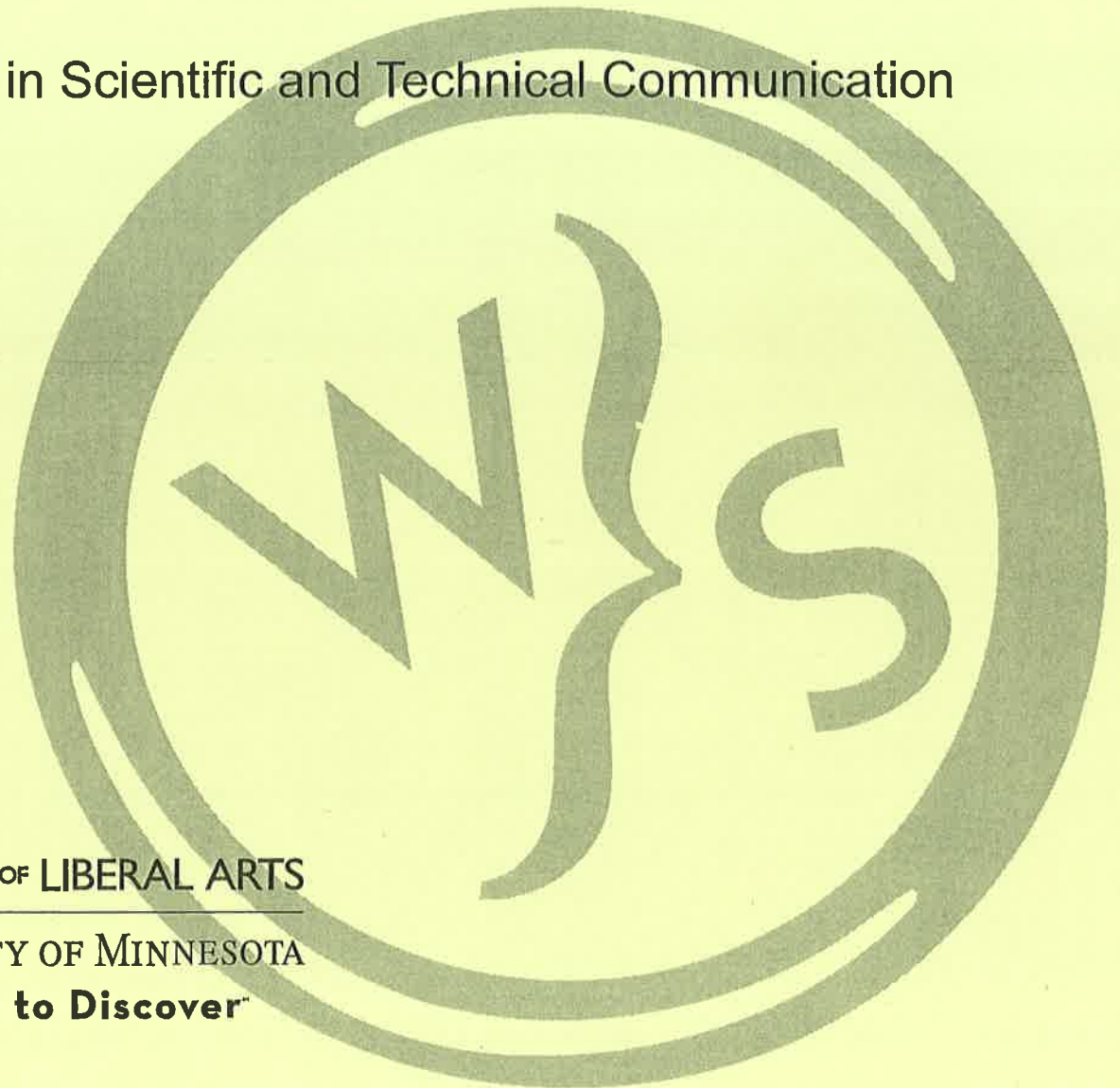*File Upstairs*

DEPARTMENT OF
WRITING STUDIES

2009—2010
Undergraduate Handbook

B.S. in Scientific and Technical Communication

COLLEGE OF **LIBERAL ARTS**

UNIVERSITY OF MINNESOTA
Driven to Discover

Undergraduate Handbook

Bachelor of Science
Scientific and Technical Communication
(S&TC)

2009—2010

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WELCOME

Welcome to the Department of Writing Studies and to the Scientific and Technical Communication Bachelor of Science program!

The Scientific and Technical Communication (S&TC) Bachelor of Science degree is offered by the Department of Writing Studies, which is in the College of Liberal Arts (CLA) on the East Bank of the University of Minnesota Twin Cities campus in the Communications and Media Community (http://cam.class.umn.edu/). Our program is one of approximately 70 programs in the United States offering an S&TC undergraduate degree.

This **Student Handbook** is designed to answer many of the questions students ask about the S&TC degree at the University of Minnesota. The handbook includes information about the degree program and the S&TC profession. Also included are

- College admission requirements
- Advising: CLA and S&TC major advisers
- Academic requirements necessary for graduation
- Department resources and course descriptions

Using this handbook in conjunction with advisor meetings and other resources will greatly enhance your success in the program. Other resources include the *University of Minnesota Undergraduate Catalog* (http://www.catalogs.umn.edu/ug/) and the Department of Writing Studies Website, Bachelor of Science degree In S&TC (http://www.writingstudies.umn.edu/ugrad/.)

DEPARTMENT OF WRITING STUDIES

Part of the University of Minnesota's College of Liberal Arts, we are an academic department with nationally recognized strengths in teaching and scholarship in rhetoric, writing, and technical communication. With 13 tenured or tenure-track faculty, over 20 full-time instructors, and degrees from the bachelor's to the doctorate, we offer a diverse set of research, teaching, and learning opportunities.

The department touches the lives of every undergraduate on campus, teaching over 170 sections of first-year writing as well as courses in technical writing and communication, rhetorical theory, composition, and professional communication. Graduates from our B.S., M.S., and certificate programs are prepared for successful careers in scientific and technical communication and are in high demand by companies both local and national. Our M.A. and Ph.D. graduates pursue careers primarily in academic settings as college professors and instructors.

We are also the administrative home of the Center for Writing, which provides face-to-face and online writing assistance as well as other programs of interest. Faculty and staff in both the center and the department enjoy many collaborative relationships including funded research to study how writing is most effectively taught in different academic disciplines. Learn more about the Center for Writing at their web site http://writing.umn.edu/.

To learn more about the Department of Writing Studies, visit our website at http://www.writingstudies.umn.edu.

DEPARTMENT OF WRITING STUDIES RESOURCES

Undergraduate Major in Scientific and Technical Communication Web Site

Visit our web site for current information about major requirements, resources, internships and more: http://www.writingstudies.umn.edu/ugrad/.

Writing Studies Undergraduate List-serve

When you declare an S&TC major, your official University of Minnesota email address will be added to the department's undergraduate list-serve. The department will communicate upcoming events and information, such as internship opportunities, through this list. If you are not receiving emails from us, please contact Shannon Klug.

Center for Writing

Through individual consultations, workshops, and research grants, the Center for Writing supports the work of all University of Minnesota students, faculty, and staff engaged in the practice, teaching, and study of writing. The Center for Writing houses five connected programs: Student Writing Support, Teaching with Writing, Interdisciplinary Studies of Writing, the Graduate Minor in Literacy and Rhetorical Studies, and the Minnesota Writing Project.
http://writing.umn.edu/

Industrial Affiliates Program (IAP)

The Industrial Affiliates Program fosters collaborative relationships between the Department of Writing Studies' scientific and technical communication program and technical communication professionals in business and industry. The IAP supports numerous internship positions throughout the academic year and offers graduate students in our M.S., M.A., and Ph.D. programs the opportunity to collaborate on a research project with our affiliates through an annual fellowship. The IAP hosts a colloquium each spring.
http://writingstudies.umn.edu/about/iap/

DEPARTMENT OF WRITING STUDIES CONTACTS

Visit the Department of Writing Studies at 180 Wesbrook Hall, 77 Pleasant St SE on the East Bank of the University of Minnesota Twin Cities. Mail the Department of Writing Studies at

Department of Writing Studies
77 Pleasant St. SE
180 Wesbrook Hall
Minneapolis, MN 55455

Director of Undergraduate Studies

Lee-Ann Kastman Breuch, Ph.D., Associate Professor. Contact Professor Breuch for information about undergraduate courses and instruction in Writing Studies.

lkbreuch@umn.edu
150E Wesbrook
612-624-6727

Asst. Director, Undergraduate Major

Barb Horvath , Asst. Director, Undergraduate Major. Contact Barb for information about the S&TC major and internships. She is the first contact for prospective students and is usually the first advisor for new majors.

horva003@umn.edu
150F Wesbrook Hall
612-624-1902

Undergraduate Program Support

Shannon Klug, Executive Office and Administrative Specialist
Shannon can assist you with permission numbers, incomplete contracts, independent study contracts, and other forms.

klugx004@umn.edu
170C Wesbrook Hall
612-625-9236

Student Chapter of the Society for Technical Communication

This student chapter is open to all students, undergraduate and graduate. More information is available from the STC student chapter president, Alan Wyman.

Alan Wyman
wyman045@umn.edu

WHAT IS SCIENTIFIC AND TECHNICAL COMMUNICATION?

According to the Society for Technical Communication (STC), the field is defined as: "all processes by which humans convey meaning about the development and use of technology." Scientific and technical communication involves gathering, analyzing, and distributing scientific and technical information efficiently and accurately for specific audiences.

More than Just Writing

Scientific and technical communicators do far more than write. In fact, some spend more than half their time gathering information. For this reason, they must possess excellent interpersonal skills. For example, communicators may work with scientists, engineers, doctors, or computer programmers, to learn about products or services. They may work with product developers in the design stage to provide input on user needs and design considerations.

Scientific and technical communicators transform concepts and ideas into forms that audiences can use and understand. They analyze their audience, the purpose of the communication, and the information to be presented. They select appropriate formats such as reports, newsletters, policy and procedure manuals, brochures, user manuals, videos, online documentation, multimedia, or websites based on their analyses. Finally, they design, produce, and implement the presentation or document, then test it for usability.

Job Titles of Technical Communicators

- communication consultant
- communication manager
- documentation engineer
- documentation specialist
- freelance writer
- information developer
- information engineer
- information architect
- instructional designer
- marketing writer

- multimedia specialist
- program planner
- publications specialist
- technical editor
- technical writer
- training specialist
- usability engineer
- video scriptwriter
- webmaster
- website designer

In addition, scientific and technical communicators frequently advance into management because of their excellent communication skills.

Our graduates consistently find rewarding careers with outstanding companies. Others pursue graduate education.

Rewarding Careers with Outstanding Companies

Technical communication is a field on the rise, and the demand for trained communicators in this profession is strong and likely to increase. The Twin Cities is home to many companies and organizations that hire technical communicators.

Although many of our graduates work for private industries, they also find work in government or educational organizations. S&TC graduates often work in computer, medical, financial or other business industries with outstanding companies, including the following:

- 3M
- Argonne National Laboratory
- Attorney General's Office
- Bolger Publication
- Boston Scientific Corporation
- Cardiac Pacemaker, Inc.
- Cardiometrics
- Central Engineering Company
- Computer Task Group, Inc.
- Cray Research
- Cyber Optics
- Dasche and Thompson
- Deluxe Corporation
- Desk Top Ink
- EarthWatch Communications
- Fredrickson Communications
- Guidant
- Honeywell
- IBM-Rochester

- IBM-Santa Teresa Laboratory
- Interactive Technologies, Inc.
- Intergraph
- Locus Computing Corporation
- Logis
- Medtronic
- MGS Systems
- Microsoft
- National Board of Medical Writers
- Norwest
- Premis Corporation
- Protein Design Labs
- Seagate Technology
- Symantec
- UNISYS
- U.S. Bank
- Writar
- Xerox
- Yamamoto Moss

Graduate School Placement

Some S&TC graduates complete the Bachelor of Science degree in S&TC as a foundation for pursuing post-graduate degrees. Graduates have been accepted into graduate programs around the country, including the following institutions:

- Carnegie Mellon University
- Georgetown University
- Hamline Law School
- Harvard University
- Michigan Technological University

- New Mexico State University
- Rensselaer Polytechnic Institute
- Texas Tech University
- University of Minnesota
- University of Washington

OVERVIEW OF THE BACHELOR OF SCIENCE DEGREE IN S&TC

The Department of Writing Studies offers a Bachelor of Science (BS) degree in Scientific and Technical Communication (S&TC). This degree offers a unique combination of written, oral, and visual communication theory and practice as they apply to interdisciplinary areas of science and technology.

This program examines how communication is a complex process that involves both the robust principles of audience, persuasion, clarity, accuracy, and ethical integrity, and a command of the knowledge of scientific and technical topics that one communicates. Students have the opportunity to examine social, legal, ethical, and political implications of communication as they relate to science, environment, gender, technology, diverse cultures, and workplace practices. People who choose this program tend to be interested in communication as well as science or technology. The degree provides a sound background in both areas.

Students will study theories of rhetoric and communication and apply principles of audience analysis, writing and editing, information design, oral communication, and visual rhetoric. They will learn to engage in writing as a process and examine writing within communities of practice.

Our department is one of about 70 programs in the U. S. that offers a bachelor's degree in scientific and technical communication (S&TC). We are leaders in educating and training scientific and technical communicators. Our graduates' placement rates are high, and our program is growing.

Learning Objectives

- Conduct audience analysis
- Write effective print and electronic documents and messages in a variety of genres
- Edit documents for clarity, conciseness, voice, and correctness
- Design attractive and useable documents based on visual rhetoric theories
- Integrate visuals and text
- Select and design media for particular audiences, messages, and purposes
- Test for usability
- Select appropriate research methods, evaluate sources, and conduct research
- Conduct informational interviews
- Understand and apply information and project management principles
- Design and deliver effective oral presentations
- Collaborate on team-written documents
- Identify and understand major theoretical movements and figures within rhetorical theory
- Apply rhetorical theory to professional practice
- Place technical skills into broader social contexts, drawing upon literary, historical, and theoretical works that speak to the intersections among people, technologies, and their environments
- Recognize how issues of race, gender, age, sexual orientation, and religion can affect writing and scientific and technical communication.
- Review and reflect on current controversies in scientific and technical fields, working to shape personal ethics and public policy
- Understand the implications of the global contexts in which we live and work

BEGINNING THE S&TC MAJOR

Admission

The Scientific and Technical Communication (S&TC) Bachelor of Science program is offered by the Department of Writing Studies, in the College of Liberal Arts (CLA) within the Communication and Media Community. The Writing Studies department is located in Wesbrook Hall, and the College of Liberal Arts is housed in Johnston Hall; both located on the Minneapolis campus of the University of Minnesota, Twin Cities. More information on admission to the College of Liberal Arts can be found at the College's Prospective Student page (http://discovercla.umn.edu/)

Necessary Steps

To apply for admission to the S&TC Bachelor of Science degree, follow these steps:

1. Apply for admission to CLA at the university of Minnesota: http://admissions.tc.umn.edu/
2. Attend the CLA Orientation session and meet with your CLA advisor regarding your CLA Liberal Arts requirements. The S&TC major is housed in the Communications and Media student community in B16 Johnston Hall: http://cam.class.umn.edu
3. Make an appointment with Assistant Director, Undergraduate Major in to apply for the S&TC major and to plan your coursework. Barb Horvath, 143 Wesbrook Hall, horva003@umn.edu, or 612-624-1902.
4. You will be required to complete your CLA Liberal Education Requirements and 50 credits in the S&TC major: 35 major credits and 15 sub-plan credits.

Transfer Students

If you are a transfer student, the Office of Admissions and the College of Liberal Arts will evaluate all of your previous college work according to the standards of the University and the College. You will then receive a Transfer Credit Evaluation sheet which shows how your previous work fits into your current degree requirements. Transfer students are required to complete all specific course and area distribution requirements of the program regardless of the number of credits accepted for transfer. If you are already a student at the University of Minnesota, apply for transfer at the Office of Admissions on the campus where you are currently registered. For more information see http://discovercla.umn.edu/info/transferring.html.

Transferring from programs within the University

To transfer from other University colleges or programs , you will be required to complete all specific course and area distribution requirements of the program regardless of the number of credits accepted for transfer. Complete the Application for Change of College or Degree Program at http://admissions.tc.umn.edu/Apply/index.html.

Returning Students

If you were a student at the Twin Cities campus and are returning to the University of Minnesota, you need to apply for a transfer at the Office of Admissions on the campus where you last attended classes. If you attended a different college or university, follow the guidelines for transfer students.

Honors Program

To be considered for the CLA Honors program (http://www.cla.umn.edu/honors/), you will need to submit a separate application in addition to your application to the University of Minnesota. The application can be found at http://www.cla.umn.edu/honors/programinfo.htm.

COMPLETING THE REQUIRED COURSES

S&TC Program Requirements

The Bachelor of Science in Scientific and Technical Communication (S&TC) major requires 50 major credits in addition to the University's Liberal Education Requirements. Of the 50 major credits, 35 are S&TC major requirements, and 15 are sub-plan credits in one of four areas: Information Technology and Design, Biological and Health Sciences, Legal Discourse and Public Policy, and Environmental Science (see the course requirements on pages 10-16 of this handbook). Please note that *all required courses must be taken for A-F grades*, except for the internship, WRIT 4196, which can only be taken S/N. A grade of at least C- is required for all degree requirements. The Director of the S&TC Undergraduate Major gives final approval of the program requirements.

> **For more information**, contact Barbara Horvath, Assistant Director, Undergraduate Major, horva003@umn.edu, or 612-624-1902

CLA and Liberal Education Requirements

CLA and the Liberal Education committee give final approval of the Liberal Education Requirements. You can review these requirements at http://iamnew.class.umn.edu/degreerequirements.html. (Also see page 9 of this handbook) You will need to meet these requirements to qualify for graduation, so be sure to make an appointment with your CLA adviser in your first semester at the University.

> Communications and Media Student Community
> B-16 Johnston Hall
> 101 Pleasant St. SE
> Minneapolis, MN 55455
> E-Mail cam@class.cla.umn.edu
> Phone (612) 624-1820
> Fax (612) 626-0022
> Hours M-F 8:00 - 4:30
> Website: http://cam.class.umn.edu/index.html.

Advising

As an S&TC major, you will have two advisers:

1. A CLA adviser in B16 Johnston Hall who advises you on your Liberal Education Requirements, APAS issues, petitions, and graduation clearance. You are encouraged to meet with your CLA adviser once per year to track your progress on completing all requirements for graduation.

2. An S&TC major adviser who advises you on your S&TC major requirements, course and sub-plan choices, and academic and career decisions. (Barbara Horvath will be your adviser for your first S&TC semester. After that you will be appointed a faculty adviser from S&TC faculty members.) You are encouraged to meet with your major adviser once each semester or academic year to track your progress on the S&TC major requirements.

Writing Studies Courses that Meet University-Wide Requirements

Students must complete 120 credits to graduate, including 46 credits in the major (see page 10 for major requirements). A grade of C- is required in all major degree requirements. Students need a GPA of 2.00 in major and in all coursework taken at the university. At least 30 credits must be completed in the Department of Writing Studies.

WRITING INTENSIVE REQUIREMENTS

First-Year Writing (1 course) *Writing Studies options: 1301* or *1401*		
Writing-Intensive (4 courses) *Writing Studies options: 1908W, 3029W, 3152W, 3221W,* *3562W(counts as two), 3577W, 3701W, 4573W, 4662W*		

(NOTE: If students complete the Minnesota Transfer Curriculum at any participating Minnesota college or university, they fulfill the University's Twin Cities campus liberal education requirements, including the first-year writing requirement.)

DIVERSIFIED CORE REQUIREMENTS

Physical and Biological Sciences (8 cr)

Physical science with laboratory or field experience		
Biological science with laboratory or field experience		

Social Science and Humanities (15 cr)

Social Science (6 cr) *Writing Studies options: 3221W*		
Historical Perspective (3 cr) *Writing Studies options: 3371*		
Humanities—Literature (3 cr) *Writing Studies options: 1311, 3361*		
Humanities—Other (3 cr) *Writing Studies options: 3315, 3302, 3381*		

Mathematical Thinking (3 cr)

There are no program requirements that meet this liberal education requirement.

Designated Themes of Liberal Education (12 cr)

Environment (3 cr) *Writing Studies options: 3383*		
Cultural Diversity (3 cr) *Writing Studies Options:1311, 3315, 3108*		
International Perspectives (3 cr) *Writing Studies options: 3376W*		
Citizenship Public Ethics (3 cr) *Writing Studies Options: 1908W, 3152W, 3221W, 3361, 3371,* *3376W, 3577W*		

(Note: some diversified core courses also meet one theme requirement. Other courses may satisfy two theme requirements. Students who have completed the required coursework in the diversified core or designated theme areas but are missing one credit in either may apply for a one-credit waiver.

B.S. IN S&TC CORE CURRICULUM: SPRING SEMESTER 2009

Courses	Credits	Pre-Requisites	Offered**	Total
* Choose ONE course from the starred options.				
CORE COURSES – Twenty-six credits				**26**
WRIT 3001: Intro to Scientific & Technical Communication (S&TC) (Formerly Writ1001)	2	None	F	
WRIT 3221W: Communication Modes & Methods (Writing Intensive)	4	Soph, Jr, or Sr	F, S	
WRIT 3562W: Technical and Professional Writing (Writing Intensive – Counts as two)	4	Jr or Sr	F,S,SS	
WRIT 3671: Visual Rhetoric	3	WRIT 3562W and S&TC major	F	
WRIT 3701W: Rhetorical Theory for S&TC	4	Soph, Jr, or Sr	S	
WRIT 4196: Internship in Scientific and Technical Communication	3	WRIT 3562W and 24 credits in S&TC major	F,S,SS	
WRIT 3441: Editing, Style, and Critique (Formerly Writ 4561: Editing and Style for Technical Communicators)	3	Soph, Jr, Sr,	F	
* WRIT 4501: Usability and Human Factors in Technical Comm.	3	Jr, Sr, or Grad student	S	
* WRIT 4258: Information-Gathering Techniques in S&TC	3	Jr, Sr, or Grad student	F	
CHOOSE 9 CREDITS FROM THE FOLLOING TWO CATEGORIES. Minimum of 3 credits from each category.				
ORAL, WRITTEN, VISUAL, AND DIGITAL COMMUNICATION– Three to six credits				**3-6**
WRIT 3257: Scientific and Technical Presentations	3	COMM 1101 or equiv.	F,S	
WRIT 3672: Project Design/Development	3	WRIT 3562W and S&TC major	S	
WRIT 4573W: Writing Proposals and Grant Management	3	WRIT 3562W, Jr, Sr, or Grad student	F	
WRIT 4662W: Emerging Technologies in S&TC	4	Jr, Sr, or Grad student	S	
SCIENCE, TECHNOLOGY, AND SOCIETY – Three to six credits				**3-6**
WRIT 3108: Gender & Ethnicity & the Rhetoric of Science & Technology	3	Soph, Jr, or Sr	S	
WRIT 3152W: Writing on Issues of Science and Technology	4	None	F, S	
WRIT 3302: Science, Religion, and the Search for Human Nature	3	None	F, S	
WRIT 3371: Technology, Society, and Self	3	Soph, Jr, or Sr	F, S	
WRIT 3383: In Search of Nature	3	None	F	
WRIT 3404: Environmental Communication	3	Soph, Jr, or Sr	F	
WRIT 3577W: Rhetoric, Technology, and the Internet	3	Soph, Jr, or Sr	F	
WRIT 4431 - Intersections of S&TC and Law	3	Jr, Sr, or Grad student	S	
TOTAL REQUIRED IN-HOUSE CREDITS for the MAJOR				**35**
REQUIRED OUTSIDE COURSES IN SUB-PLAN AREAS				**15**

Choose 15 credits in ONE of the designated sub-plans. **Subject to change. See the Class Schedule each semester.

SUB-PLANS

Sub-plans offer you the opportunity to take courses outside the department in a focused area of study that will enhance Scientific and Technical Communication courses in Writing Studies. The sub-plan approach will help prepare you for the kinds of interdisciplinary writing you may do as a writing professional. Students are required to take 15 credits of coursework in one of four sub-plans: (1) Information Technology and Design; (2) Environmental Science; (3) Biological and Health Sciences; and (4) Legal Discourse and Public Policy. Within sub-plans, at least 6 credits must be taken at the 3xxx level or above. When students enroll in the major, they must identify one sub-plan and receive approval from the Director of Undergraduate Studies or Assistant Director of Undergraduate Studies.

Note: In all sub-plans, at least 6 credits must be at the 3000-level or higher. Courses in Writing Studies that have been used to fulfill major requirements or electives may not be counted again to complete sub-plan requirements.

Sub-plan 1. Information Technology and Design

Writing Studies course required for this sub-plan:
WRIT 3577W: Rhetoric, Technology and Internet, 3 cr (fulfills S&TC major elective)

Choose 15 credits from the following courses:

Courses	Credits	Prerequisite
AFEE 3112: Technical Drawing and Production Technologies	3	None
ARCH 3611: Design in the Digital Age	3	None
ARTH 3422: Off the Wall: History of Graphic Arts in Europe and America in the Modern Age	4	None
ARTH 5454: Design Reform in the Era of Art Nouveau	3	None
BIE 3111: Exploring Technology Systems	3	None
COMM 3201: Introduction to Electronic Media Production	4	None
COMM 3204:Advanced Electronic Media Production	4	COMM 3201
COMM 3211: Introduction to U.S. Electronic Media	3	None
COMM 4231: Comparing Electronic Media Systems, IP	3	COMM 3211 or instructor permission
COMM 4291: New Telecommunication Media	3	COMM 3211 or inst. permission
CSCI 1001: Overview of Computer Science	4	None
CSCI 1103: Introduction to Computer Programming in Java	4	None
CSCI 1113: Introduction to C/C++ Programming for Scientists and Engineers	4	Math 1271 or 1371
CSCI 1901: Structure of Computer Programming I	4	MATH 1371 or equiv or #
CSCI 2011: Discrete Structures of Computer Science	4	MATH 1271 or MATH 1371 or #
CSCI 3921W: Social, Legal, and Ethical Issues in Computing	3	At least soph or #
DESI 3010: Travels in Typography	3	None
DESI 4001: Design Minor Seminar	4	Design minors
DHA 1101W: Introduction to Design Thinking, OH, WI	4	None
DHA 1315: Foundations: The Graphic Studio	4	Instructor permission

DHA 2101: Design and Visual Presentation	3	Non-design major
DHA 4131W: History of Visual Communication, HP, WI	4	Intro history or art history course
GEOG 3561: Principles of Geographic Information Science	4	Jr or Sr
HSCI 3331: Technology and American Culture	3	None
HSCI 3401: Ethics in Science and Technology	3	None
HSCI 3714: Technology and Civilization: Stone Tools to Steam Engines	4	none
HSCI 3715: Technology and Civilization: Waterwheels to the Web	4	None
HSCI 4321: History of Computing	3	None
HUMF 5001: Foundations of Human Factors/Ergonomics	3	None
JOUR 3006: Visual Communication	3	Instructor permission
JOUR 3614: History of Media Communication, HP	3	Non-Journalism major
JOUR 4272: Interactive Advertising	3	Non-Journalism major
JOUR 4551: New Media Culture	3	Non-Journalism major
KIN 3505: Intro to Human-Centered Design	3	None
PHIL 4615: Minds, Bodies, and Machines	3	One course in Philosophy
UC 3201: Web Designer Introduction	4	None

Sub-plan 2. Biological and Health Sciences

Students are strongly encouraged to take BIOL 1009 and ANAT 3001 within this sub-plan.

Choose 15 credits from the following courses.

Courses	Credits	Prerequisite
ANAT 3001: Human Anatomy	4	BIOL 1009 or equiv
BIOC 2011: Biochemistry for Agriculture and Health Sciences	3	BIOL 1009 or CHEM 1011
BIOC 3021: Biochemistry	3	BIOL 1002, 1009, or 2003; or CHEM 2301
BIOL 1001: Introductory Biology I: Evolutionary and Ecological Perspectives	4	None
BIOL 1009: General Biology	4	high-school chemistry; 1 term college chemistry recommended
BIOL 1101W: Heredity and Human Society	3	None
BIOL 2012: General Zoology	4	One semester of college biology
BIOL 2022: General Botany	3	One semester of college biology
BIOL 3811: Introduction to Animal Behavior	4	BIOL 1002, 1009, or 2003
BIOL 3825: Ecological Genetics	2	General biology
BIOL 4003: Genetics	3	BIOC 3021 or 4331
BIOL 4004: Cell Biology	3	BIOC 3021 or 4331. BIOL 4003

Courses	Credits	Prerequisite
CHEM 1015: Introductory Chemistry Lecture	3	Prereq-[high school chemistry or equiv], two yrs high school math, not passed chem placement exam; high school physics recommended
CHEM 1015: Introductory Chemistry Lecture	3	Prereq-[high school chemistry or equiv], two yrs high school math, not passed chem placement exam; high school physics recommended
CHEM 1017: Introductory Chemistry Lab	1	1015 or & 1015
CHEM 1021: Chemical Principles I	4	Grade of at least C- in [1011 or 1015] or passing placement exam; intended for science or engineering majors
CHEM 1022: Chemical Principles II	4	Grade of at least C- in 1021 or equiv
CHEM 2101: Introductory Analytical Chemistry Lecture	3	1022 or equiv
CHEM 2111: Introductory Analytical Chemistry Lab	2	2101 or & 2101
CHEM 2301: Organic Chemistry I	3	Grade of at least C- in [1022 or 1032H] or equiv
CHEM 2302: Organic Chemistry II	3	Grade of at least C- in 2301
CHEM 2311: Organic Lab	4	Grade of at least C- in 2302 or & 2302
CHEM 4001: Chemistry of Plant Materials	4	CHEM 2302
MICB 3301: Biology of Microorganisms	5	BIOL 1002, 1009, or 2002
PHAR 1002: Health Sciences Terminology	2	None
PHAR 5201: Health Sciences Applied Terminology	2	Basic knowledge of human anatomy/ physiology
PHCL 3100: Pharmacology for Pre-Med and Life Science Students	2	College-level biology; biochemistry or physiology recommended
PHIL 1005: Scientific Reasoning	4	1st or 2nd yr student or #
PHIL 3601W: Scientific Thought	4	One course in philosophy or natural science
PHIL 4607: Philosophy of Biology	3	Courses in philosophy or biology or instr consent
PHSL 3051: Human Physiology	4	BIOL 1009 or 1 yr college biol, 1 yr college chem
PUBH 3001: Personal and Community Health	2	None
PUBH 3004: Basic Concepts in Personal and Community Health	4	None
STAT 1001: Introduction to the Ideas of Statistics	4	High school algebra
STAT 3011: Introduction to Statistical Analysis	4	Two yrs high school math

Sub-plan 3. Legal Discourse and Public Policy

Writing Studies courses required for this sub-plan:
WRIT 4431: Intersections of S&TC and Law, 3 cr (fulfills S&TC major elective)
WRIT 3577W: Rhetoric, Technology, and the Internet, 3 cr

Choose 15 credits from the following courses:

Courses	Credits	Prerequisite
AMIN 4231: The Color of Public Policy	3	None
COMM 3631: Freedom of Speech	3	None
CSCI 3921W: Social, Legal, and Ethical Aspects of Computing	3	At least soph or instr consent
HIST 4337: Bill of Rights and the Supreme Court Since 1865	4	Jr or sr or grad student
JOUR 3007: The Media in American History and Law	3	Non-jour major or [jour major, course appr on prog plan] or [pre-jour, adviser approval]
JOUR 3776: Mass Communication Law	3	Jour major or jour minor or approved IDIM major or ICP major or BIS major or #
JOUR 5552: Law of Internet Communication	3	Non-jour major or jour major with course appr on prog plan or [pre-jour with adviser approval]
PHIL 1001: Introduction to Logic	4	None
PHIL 1004W: Introduction to Political Philosophy	4	None
PHIL 4321W: Theories of Justice	3	1003 or 1004 or #
POL 1001: American Democracy in a Changing World	4	None
POL 1201: Political Ideas and Ideologies	4	None
POL 3225: American Political Thought	3	None
POL 3308: Congressional Politics and Institutions	3	1001 or 1002 or #
POL 3309: Justice in America	3	1001 or 1002 or #
POL 4403W: Comparative Constitionalism	3	None
POL 4485: Human Rights & Democracy in the World	3	At least one 1xxx or 3xxx course in pol sci, non-pol sci major or #
POL 4501W: The Supreme Court and Constitutional Interpretation	3	1001 or 1002 or equiv or [non-pol sci] grad student or #
POL 4502W: The Supreme Court, Civil Liberties, and Civil Rights	3	1001 or 1002 or equiv or [non-pol sci] grad major or #
SOC 3101: Introduction to the American Criminal Justice System	3	credit will not be granted if credit has been received for Soc 3111
SOC 4101W: Sociology of Law	3	1001 or 3101 or 3102 or 3111 or #; 3701 recommended
SOC 4161: Criminal Law in American Society	3	3101 or 3102 or 3111 or #
SOC 4162: Criminal Procedure in American Society	3	3101 or 3102 or 3111 or #
SOC 4170: International Law and Cultural Change	3	1001 or 3101 or 3102 or 3111 or #
SOC 4175: Law, Politics, and Inequality	3	1001 or 3101 or 3102 or 3111 or #

Sub-plan 4. Environmental Science

Choose 15 credits from the following courses.

Courses	Credits	Prerequisite
AGRO 3203W or ANSC 3203W: Environment, Global Food Production, and the Citizen	3	Biol 1009 or equiv
AGRO 5321 or ENT 5321: Ecology of Agricultural Systems	3	[3xxx or above] course in [Agro or AnSc or Ent or Hort or PlPa or Soil]
ANTH 3041: Ecological Anthropology	3	1003 or #
ANTH 4069: Environmental Archaeology	3	1001, 3001 or grad
APEC 3611: Environmental and Natural Resource Economics	3	1101 or Econ 1101
ARCH 4561: Architecture and Ecology	3	None
BBE 4733: Renewable Energy Technologies	3	4013 or equiv or #
BIOL 3407 or BIOL 3408W: Ecology	3	[One semester college biology], [MATH 1142 or MATH 1271 or MATH 1281 or equiv]
CE 3501: Environmental Engineering	3	Chem 1022, Phys 1302
CHEN 5551: Survey of Renewable Energy Technologies	3	Upper div or #], basic knowledge of chemistry, thermodynamics
ECON 3611: Environmental Economics	3	1101, 1102, or equiv; not open to Econ majors
EEB 3001: Ecology and Society	3	[Jr or sr] recommended; biological sciences students may not apply cr toward major
ESPM 1011: Issues in the Environment	3	None
ESPM 2041: Natural Resources Consumption and Sustainability	3	None
ESPM 3011W: Ethics and Natural Resources	3	None
ESPM 3241W: Natural Resource and Environmental Policy: History, Creation, and Implementation	3	None
ESPM 3251: Natural Resources in Sustainable International Development	3	None
ESPM 3261: Economics and Natural Resources Management	4	None
ESPM 3601: Our Home, Our Environment	3	None
ESPM 3603: Environmental Life Cycle Analysis	3	None
ESPM 3604: Environmental Management Systems and Strategy	3	None
FW 4102: Principles of Conservation Biology	3	Biol 1009 or equiv; Biol 3407 recommended
FW 5455: Sustainable Aquaculture	3	Intro biology, intro chemistry] or #

Courses	Credits	Prerequisites
GEO 1001: The Earth and Its Environments	4	None
GEO 1002: Earth History	4	None
GEO 3002: Climate Change and Human History	3	None; no credit if taken 5102
GEO 3003: Geohazards	3	None
GEO 3004: Water and Society	3	None
GEO 3005: Earth Resources	3	None
GEOG 3355: Environmental Quality	3	None
GEOG 3379 or GLOS 3303: Environment and Development in the Third World	3	Soph or jr or sr
GEOG 3401: Geography of Environmental Systems and Global Change	4	None
HIST 3452: African Conservation Histories	3	None
HORT 4072: Growing Plants Organically: What It Means To Be Green	3	Permission #
HSCI 3244: History of Ecology and Environmentalism	3	None
LA 3501: Environmental Design and Its Biological and Physical Context	3	None
PHIL 3301: Environmental Ethics	4	None
SOC 4305: Society and the Environment: A Growing Conflict	3	Soc 1001, or environmental course
SOC 4311: Race, Class, and the Politics of Nature	3	None
URBS 3751: Understanding the Urban Environment	3	None
SUST 3003/GLOS 3304: Sustainable People, Sustainable Planet	3	Soph or jr or sr

SAMPLE 4-YEAR PLANS

Sub-Plan in Information Technology and Design (IT/Design)

Year 1 Fall semester: 15 cr	Year 1 Spring semester: 14 cr
Writ 1301/equiv of freshman composition 3 cr LE Requirement:4 cr LE Requirement: 4 cr LE Requirement 4 cr	COMM 1101: Introduction to Public Speaking; (prerequisite for Writ 3257) 3 cr CSCI 1113: Introduction to C/C++ Programming for Scientists and Engineers 4 cr (Note CSCI 1113 is an example. Any required sub-plan course may be substituted here.) LE Requirement:3 cr LE Requirement: 4 cr
Year 2 Fall Semester : 15 cr	**Year 2 Spring Semester : 15 cr**
WRIT foundation course (e.g. 3244) 3 cr DHA 1101W: Introduction to Design Thinking, 4 cr (Note DHA 1011W is an example. Any required sub-plan course may be substituted here.) LE Requirement 4 cr Elective 4 cr	WRIT 3221W: Communication Modes & Methods WI 4 cr WRIT 3701W: Rhetorical Theory for S&TC WI 4 cr LE Requirement 4 cr LE Requirement 4 cr
Year 3 Fall semester: 15 cr	**Year 3 Spring semester: 16 cr**
WRIT 3001: Intro to Scientific & Technical Communication 2 cr WRIT 3562W: Technical and Professional Writing Wi 4 Cr WRIT 3577W: Rhetoric, Technology, and the Internet 3cr WRIT 3257: Scientific and Technical Presentations 3 cr (Note: 3257 is an example. Any listed Required WRIT elective may be substituted here.) Elective 3 cr	WRIT 3441: Editing, Critique, and Style 3 cr WRIT 3108: Gender & Ethnicity & the Rhetoric of Science & Technology 3 cr (Note: 3108 is an example. Any listed Required WRIT elective may be substituted here.) ARCH 3611: Design in the Digital Age Elective 3 cr (Note ARCH 3611 is an example. Any required sub-plan course may be substituted here.) Elective 3 cr Elective 4 cr
Year 4 Fall semester: 16 cr	**Year 4 Spring semester: 14cr**
WRIT 3671: Visual Rhetoric 3cr COMM 3201: Introduction to Electronic Media Production 4 cr (Note COMM 3201 is an example. Any required sub-plan course may be substituted here.) Elective 3 cr Elective 3 cr Elective 3 cr	WRIT 4196: Internship in Scientific and Technical Communication 3 cr WRIT 4501: Usability and Human Factors in Technical Comm. 3 cr COMM 3204:Advanced Electronic Media Production 4cr (Note COMM 3404 is an example. Any required sub-plan course may be substituted here.) Elective 4cr

Sub-Plan in Biological and Health Sciences (BiolHSc)

Year 1 Fall semester: 14 cr	Year 1 Spring semester: 15 cr
Writ 1301/equiv of freshman composition 3 cr BIOL 1009 General Biology 4 cr LE Requirement: 3 cr LE Requirement 4 cr	COMM 1101: Introduction to Public Speaking 3 cr (prerequisite for Writ 3257) CHEM 1011: Introductory Chemistry: Lecture and Laboratory 4 cr (Note: CHEM 1011 is an example. Any required sub-plan course may be substituted here.) LE Requirement: 4 cr LE Requirement 4 cr
Year 2 Fall Semester : 15 cr	**Year 2 Spring Semester : 16 cr**
WRIT foundation course (e.g. 3244) 3 cr WRIT 3221W: Communication Modes & Methods WI 4 cr LE Requirement 4 cr Elective 4 cr	BIOL 2012: General Zoology 4 cr LE Requirement: 4 cr LE Requirement 4 cr LE Requirement 4 cr
Year 3 Fall semester: 15 cr	**Year 3 Spring semester: 14 cr**
WRIT 3001: Intro to Scientific & Technical Communication 2 cr WRIT 3562W: Technical and Professional Writing Wi 4 Cr WRIT 3577W: Rhetoric, Technology, and the Internet 3 cr (Note :WRIT 3577 is an example. Any major Required Elective course may be substituted here.) ANAT 3001: Human Anatomy 4 cr (Note: ANAT 3001 is an example. Any required sub-plan course may be substituted here.) Elective 3 cr	WRIT 3701W: Rhetorical Theory for S&TC WI 4 cr WRIT 3371: Technology, Society, and Self 3 cr (Note: WRIT 3371 is an example. Any listed Required WRIT elective may be substituted here.) Elective 4 cr Elective 3 cr
Year 4 Fall semester: 16 cr	**Year 4 Spring semester: 15cr**
Writ 4258: Info-Gathering Techniques in S&TC; 3 cr WRIT 3671: Visual Rhetoric 3cr WRIT 4573W: Writing Proposals and Grant Management 3 cr (Note: WRIT 4573 is an example. Any listed Required WRIT elective may be substituted here.) Elective 3 cr Elective 4 cr	WRIT 4196: Internship in Scientific and Technical Communication 3 cr WRIT 3441: Editing, Style, and Critique 3 cr Elective 3cr Elective 3 cr Elective 3cr

Sub-Plan in Legal Discourse And Public Policy (Leg/PubPol)

Year 1 Fall semester: 15 cr	Year 1 Spring semester: 15 cr
Writ 1301/equiv of freshman composition 3 cr LE Requirement: 4 cr LE Requirement: 4 cr LE Requirement 4 cr	COMM 1101: Introduction to Public Speaking 3 cr (prerequisite to WRIT 3257) PHIL 1001: Introduction to Logic 4 cr (Note: PHIL 1001 is an example. Any required sub-plan course may be substituted here.) LE Requirement: 4 cr LE Requirement 4 cr
Year 2 Fall Semester : 15 cr	**Year 2 Spring Semester : 15 cr**
WRIT foundation course (e.g. 3244) 3 cr LE Requirement 4 cr LE Requirement 4 cr Elective 4 cr	WRIT 3221W: Comm. Modes & Methods 4 cr LE Requirement 4 cr LE Requirement 4 cr Elective 3 cr
Year 3 Fall semester: 15 cr	**Year 3 Spring semester: 16 cr**
WRIT 3001: Intro to Scientific & Technical Communication 2 cr WRIT 3562W: Technical and Prof. Writing WI 4 Cr WRIT 3577W: Rhetoric, Technology, and the Internet 3cr JOUR 3776: Mass Communication Law 3 cr (Note: JOUR 3776 is an example. Any required sub-plan course may be substituted here.) PHIL 4321W: Theories of Justice 3 cr (Note: PHIL 4321 is an example. Any required sub-plan course may be substituted here.)	WRIT 3701W: Rhetorical Theory for S&TC WI 4 cr WRIT 3441: Editing, Style, and Critique 3 cr WRIT 4431: Intersections of S&TC and the Law 3cr WRIT 3672: Project Design/Development 3 cr (Note: WRIT 3672 is an example. Any listed Required WRIT elective may be substituted here.) Elective 3 cr
Year 4 Fall semester: 15 cr	**Year 4 Spring semester: 14 cr**
WRIT 3671: Visual Rhetoric 3cr POL 4485: Human Rights & Democracy in the World 3cr (Note: POL 4485 is an example. Any required sub-plan course may be substituted here.) Elective 3 cr Elective 3 cr Elective 3cr	WRIT 4196: Internship in Scientific and Technical Communication 3 cr WRIT 4501: Usability & Human Factors in Tech Comm 3 cr HIST 4337: Bill of Rights and the Supreme Court Elective 4 cr (Note: HIST 4337 is an example. Any required sub-plan course may be substituted here.) Elective 4 cr

Sub-Plan in Environmental Science (EnvSC)

Year 1 Fall semester: 15 cr	Year 1 Spring semester: 15 cr
Writ 1301/equiv of freshman composition 3cr LE Requirement: 4cr LE Requirement: 4cr LE Requirement 4cr	COMM 1101: Introduction to Public Speaking 3cr (prerequisite for Writ 3257) GEO 1001: The Earth and Its Environments 4cr (Note: GEO 1001 is an example. Any required sub-plan course may be substituted here.) LE Requirement: 4cr LE Requirement 4cr
Year 2 Fall Semester : 15 cr	**Year 2 Spring Semester : 15 cr**
WRIT foundation course (e.g. 3244) 3cr LE Requirement 4cr LE Requirement 4cr Elective 4cr	WRIT 3221W: Comm. Modes & Methods WI 4cr GEO 3002: Climate Change and Human History 3cr (Note: GEO 3002 is an example. Any required sub-plan course may be substituted here.) LE Requirement 4cr Elective 4cr
Year 3 Fall semester: 15 cr	**Year 3 Spring semester: 15 cr**
WRIT 3001: Intro to Scientific & Technical Communication 2cr WRIT 3562W: Technical and Prof. Writing WI 4cr WRIT 3257: Scientific and Technical Presentations 3cr (Note: 3257 is an example. Any listed Required WRIT elective may be substituted here.) WRIT 3577W: Rhetoric, Technology, and the Internet 3cr (Note: WRIT 3577 is an example. Any major Required Elective course may be substituted here.) ANTH 3041: Ecological Anthropology (Note: ANTH 3041 is an example. Any required sub-plan course may be substituted here.)	WRIT 3701W: Rhetorical Theory for S&TC WI 4cr WRIT 3108: Gender & Ethnicity & the Rhetoric of Science & Technology 3cr (Note: 3108 is an example. Any listed Required WRIT elective may be substituted here.) PHIL 3301: Environmental Ethics 4cr (Note: PHIL 3301 is an example. Any required sub-plan course may be substituted here.)
Year 4 Fall semester: 16 cr	**Year 4 Spring semester: 14cr**
WRIT 3671: Visual Rhetoric 3cr Writ 4258: Info-Gathering Techniques in S&TC 3 cr GEO 3005: Earth Resources 3 cr (Note: GEO 3005 is an example. Any required sub-plan course may be substituted here.) Elective 3cr Elective 4cr	WRIT 3441: Editing, Style, and Critique 3cr WRIT 4196: Internship in Scientific and Technical Communication 3cr Elective 4cr Elective 4cr

S&TC INTERNSHIP REQUIREMENT

You are required to complete a three-credit internship (WRIT 4196) to fulfill your S&TC Major Requirements. Students generally complete the internship in the summer after their junior year or in their senior year. We recommend that you complete WRIT 3441, WRIT 3562, and WRIT 3671 before enrolling in WRIT 4196. Talk with your adviser, and see the department site for more information: http://www.writingstudies.umn.edu/ugrad/internships.html.

Locating an Internship

- Begin looking for an internship early—a semester before you intend to enroll
- Check opportunities on the Department of Writing Studies' site: http://writ.umn.edu/ugrad/locate.html and on the Writing Studies list serve
- See the resources at the CLA Career Services: http://www.cclc.umn.edu/
- Do your own networking

Overview of Internship Requirements

- Work 135 hours minimum doing professional S&TC tasks for three credits
- Enroll in WRIT 4196: Internship in Scientific and Technical Communication
- Submit a work agreement signed by your employer
- Complete five bi-monthly progress reports
- Submit a final internship report
- Submit an evaluation report completed by your supervisor

Internship Course (WRIT 4196-Online)

To register for Writ. 4196

- Contact the internship coordinator in Writing Studies to approve your internship for major credit: Barb Horvath horva003@umn.edu, or 612-624-1902
- Submit your *Work Experience Agreement Plan* signed by you and your supervisor (Form: http://www.writingstudies.umn.edu/ugrad/internships.html)
- When approved, register for the online internship course using the special registration number (Form: http://www.writingstudies.umn.edu/ugrad/internships.html)

Online class requirements

- Complete 135 hours of S&TC related work
- Submit five progress reports to the WebCT site
- Participate in WebCT discussions
- Submit a 10-12 page final report including an example of your technical communication project
- Have your employer evaluate your performance and submit the *Supervisor Performance Report* (Form: http://www.writingstudies.umn.edu/ugrad/internships.html)

UNIVERSITY COMPUTER RESOURCES

UMN courses for students

As an S&TC major, you will want to take advantage of the UMN resources to learn software applications. Resources include In-person, online, and custom courses.

University Technology Training Center (UTTC): Free courses for students:
http://uttc.umn.edu/training/

Get Wired: Free courses for CLA students:
http://getwired.umn.edu/

Delicious: UMN open source low-cost or free software:
http://www1.umn.edu/oit/utools/using-delicious/index.htm

UMN Software discounts for students

UTools: http://www1.umn.edu/oit/utools/licensed/agreement-students/index.htm

UMart: http://www.umart.umn.edu/

UMN credited course

UC 3201: Web Designer Introduction 1 and 11, Offered fall, spring, and summer semester

LEARNING ABROAD

Learning Abroad Center (LAC)

The Learning Abroad Center (LAC) offers semester, academic year, and winter break and May/summer term international study programs.   http://www.umabroad.umn.edu/

Make learning abroad part of your S&TC degree program!
http://www.umabroad.umn.edu/academic/majors/scientificTechCommunications.html

Find general learning abroad information, including programs available, advising, financial aid and scholarships, policies and procedures, and application materials at the Learning Abroad Center.

For information specifically on learning abroad for S&TC majors see the Study Abroad Major Advising Sheet (PDF).   http://www.umabroad.umn.edu/academic/majors/advisingSheets/SciTechComm.pdf

Early planning and systematic consultation with advisers in the Learning Abroad Center and the department is key to assuring you:

- Find the right program for you
- Meet application or scholarship deadlines are able to apply appropriate courses taken abroad to your major/minor and/or Liberal Education requirements

GRANTS AND SCHOLARSHIPS

Medtronic Technical Communication Scholarship

Medtronic, a member of Writing Studies' Industrial Affiliates Program, is the world's leading medical technology company, providing lifelong solutions for people with chronic disease. Medtronic's mission is to contribute to human welfare by application of biomedical engineering in the research, design, manufacture, and sale of instruments or appliances that alleviate pain, restore health, and extend life. To better serve our diverse clinician customers and their patients worldwide, Medtronic strives for a diverse workforce. Medtronic also has a commitment to contribute to the advancement of education. Helping students to fully realize their potential supports Medtronic in developing a diverse workforce and, ultimately, in fulfilling the corporate mission.

Award: To provide a $2,000 scholarship award to undergraduate student(s) who are majoring in the field of Scientific and Technical Communications (S&TC). The award may be given to a freshman and may be continued for four years if the student makes satisfactory progress toward a B. S. degree. (Sophomores and juniors may apply as well as seniors with at least two semesters of full-time coursework remaining.)

Criteria: The recipient(s) shall be studying toward a major in S&TC with a minimum 3.0 GPA. The award may be renewable for additional years while the student is pursuing the degree, however, students are required to apply each year for continued funding. Members of underrepresented ethnic or racial minorities are encouraged to apply. Application and an interview are required. Medtronic will select the final recipient from candidates approved by the college.

Application Process: Application instructions are available at http://www.writingstudies.umn.edu/medtronic_scholarship.html.

Society for Technical Communication (STC) Scholarships

The Society for Technical Communication sponsors fourteen scholarships of $2,000 each for school tuition and expenses. Seven awards are granted to graduate students and seven to undergraduate students. Full-time undergraduate students who have completed at least one year of a post-secondary education studying communication of information about technical subjects, and who have at least one year of study to complete their degree are eligible to apply. Applications must be postmarked by February 15 of the year for which they will be granted. Please see http://www.stc.org/scholarship_info.asp for more information and for an application form.

The local STC chapter (www.stctc.org) also offers scholarships annually to students. Check their Web site for details and the latest information.

Undergraduate Research Opportunities Program (UROP)

Undergraduate Research Opportunities Program (UROP) is a University grant that allows students to work with faculty on research relevant to Writing Studies or scientific and technical communication. Contact Career Services or the Major Coordinator for more information. See http//:www.urop.umn.edu.

Scholarships in CLA

For information about the scholarships available in CLA, check their Website:
http://cla.umn.edu/honors/schollnk.htm.

Mikelonis Scholarship

The Mikelonis Award offers a $200 award every year to an exceptional undergraduate student whose academic pursuits reflect a commitment to scientific and technical communication, rhetorical studies, and/or intercultural communication. (Suggested uses are books and a membership in the STC student chapter.) The award is presented in recognition of Professor Mikelonis's leadership, commitment, and her tremendous contributions to the University of Minnesota with the hope that the student will continue to build on Professor Mikelonis's work. To apply, see http://www.writ.umn.edu/ugrad/scholarships.html.

Students at the University of Minnesota must apply for graduation. The application process is now entirely online and can be found at http://www.onestop.umn.edu/onestop/graduating.html. Pay particular attention to the deadlines!

Fill out the Application for Degree and schedule an appointment with your CLA and S&TC major advisers to review your APAS Report. As you review your APAS, you should fill in any remaining planned coursework and review substitutions or waivers that have been approved. If you are substituting coursework, you and your adviser will need to complete a petition.

Deadlines

Be sure to review your APAS report each semester, and provide the CLA college office (B16 Johnston Hall) with information to update your APAS report as needed. Don't wait until you apply to graduate to inform us of changes.

Final deadlines for graduation applications can be found at the end of your APAS. If your fail to apply by the dates listed below, you will not be able to graduate until the following term.

Semester	Deadline
Fall 2009	September 22, 2009
Spring 2010	February 2, 2010
May Session 2010	March 24, 2010
Summer 2010	June 7, 2010

Graduation clearance

Clearances are completed once each semester after final grades are posted. The College Student Services Office will review your application, and if all requirements have been satisfied, the information will be forwarded to the Office of the Registrar, and your degree will be posted on your transcript. If course requirements remain, you will receive a letter specifying what requirements need to be fulfilled. After this initial review, we will check academic records only when students notify us that they have completed the remaining requirements.

Your semester of graduation

Your semester of graduation is dependent on when you completed your final requirements. If you apply to graduate in the fall, but it takes until spring semester to satisfy an Incomplete (I), your term of graduation will be spring semester.

Diplomas

Once your degree has been cleared, the information is added to your transcript as soon as possible. You can use that information to confirm your degree with employers, graduate schools, or other interested parties.

The Office of the Registrar is responsible for distributing diplomas. Diplomas are printed after your degree has been cleared. Normal processing time is several months. If you have questions about your diploma, you can contact the Office of the Registrar at 624-1111. Make sure that you keep your address current so the diploma gets to you. You can obtain a form to request an official transcript at University Forms Online (http://www.onestop.umn.edu/onestop/forms.html).

ACCESS FOR STUDENTS WITH DISABILITIES

The Department of Writing Studies is committed to providing access for students with disabilities.

Rights and Responsibilities

People with disabilities at the University have the following rights:
- Equal access to courses, programs, services, jobs, activities, and facilities offered through the University
- An equal opportunity to work and to learn, and to receive reasonable accommodations, academic adjustments, and/or auxiliary aids and services
- Appropriate confidentiality of all information regarding their disability and to choose to whom, outside of the University, information about their disability will be disclosed, except as disclosures are required or permitted by law

People with disabilities at the University have the following responsibilities:
- Meet qualifications and maintain essential institutional standards for courses, programs, services, jobs, activities, and facilities
- Identify as an individual with a disability when an accommodation is needed to seek information, counsel, and assistance as necessary
- Demonstrate and/or document (from an appropriate professional) how the disability limits their participation in courses, programs, services, jobs, activities, and facilities
- Follow published procedures for obtaining reasonable accommodations, academic adjustments, and/or auxiliary aids and services

The University and the Department have the following rights:
- Identify and establish essential functions, abilities, skills, knowledge, and standards for courses, programs, services, jobs, activities, and facilities and to evaluate faculty, staff, and students on this basis
- Request and receive, through Disability Services, current documentation that supports requests for accommodations, academic adjustments, and/or auxiliary aids and services
- Deny a request for accommodations, academic adjustments and/or auxiliary aids and services if the documentation demonstrates that the request is not warranted, or if the individual fails to provide appropriate documentation
- Select among equally effective accommodations, adjustments, and/or auxiliary aids and services
- Refuse an unreasonable accommodation, adjustment, and/or auxiliary aid and service that imposes a fundamental alteration on a program or activity of the University

The University and the Department are responsible for the following tasks:
- Provide information to faculty, staff, students, and guests with disabilities in accessible formats upon request
- Ensure that courses, programs, services, jobs, activities, and facilities, when viewed in their entirety, are available and usable in the most integrated and appropriate settings
- Evaluate faculty, staff, students, and applicants on their abilities and not their disabilities
- Provide or arrange reasonable accommodations, academic adjustments, and/or auxiliary aids and services for faculty, staff, students, and guests with disabilities in courses, programs, services, jobs, activities, and facilities
- To maintain appropriate confidentiality of records and communication, except where permitted or required by law

Certify your disability with Disability Services so that the Department can meet your needs.

Disability Services
McNamara Alumni Center, Suite 180
200 Oak Street SE
Minneapolis, MN 55455
612-624-4037 (V/TTY)

DEPARTMENT OF WRITING STUDIES FACULTY

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DEPARTMENT OF WRITING STUDIES COURSE DESCRIPTIONS

College of Liberal Arts

WRIT 1201 - Writing Studio
(4.0 cr; Prereq-Placement in Writ 1201; A-F only, fall, spring, summer, every year)
Introduction to and practice of writing process. Academic genres. Critical reading, rhetorical analysis for principles of audience, purpose, and argumentative strategies. Formal assignments: summary/analytical writing, source-based writing.

WRIT 1301 - University Writing
(4.0 cr; =[ENGC 1011H, ENGC 1012, ENGC 1012H, ENGC 1013, ENGC 1013H, ENGC 1014, ENGC 1014H, ENGC 1015, ENGC 1016, PSTL 1422, PSTL 1423, WRIT 1401]; Prereq-Placement in Writ 1301; A-F only, fall, spring, summer, every year)
Drafting, revising, editing. Academic genres. Critical reading, rhetorical analysis for principles of audience, purpose, and argumentative strategies. Emphasizes electronic/print library. Critical analysis, annotated bibliography, research paper.

WRIT 1311 - The Family in American Experience (CD, LIT)
(3.0 cr; fall, spring, every year)
The American family as portrayed in fiction, poetry, drama, and autobiography. Introduction to literature both as artistic and as ideological construct. Analysis of the social critique of American family life.

WRIT 1401 - Writing and Academic Inquiry
(4.0 cr; =[ENGC 1011H, ENGC 1012, ENGC 1012H, ENGC 1013, ENGC 1013H, ENGC 1014, ENGC 1014H, ENGC 1015, ENGC 1016, PSTL 1422, PSTL 1423, WRIT 1301]; Prereq-Placement in Writ 1401; A-F only, fall, spring, summer, every year)
How writing works in varying contexts/genres, how it presents complex arguments. Students read/analyze increasingly challenging texts. Concepts of audience, purpose, and context. Library research, guided revision.

WRIT 1905 - Topics: Freshman Seminar
(3.0 cr; Prereq-Fr; A-F only, fall, every year)
Topics vary.

WRIT 1908W - Topics: Freshman Seminar (C/PE, WI)
(3.0 cr; Prereq-Fr; A-F or Aud, fall, every year)
Topics specified in Class Schedule.

WRIT 1910W - Topics: Freshman Seminar (WI)
(3.0 cr; Prereq-Fr; fall, every year)
Topics vary.

WRIT 3001 - Introduction to Scientific and Technical Communication
(2.0 cr; A-F or Aud, fall, every year)
Research origins/history. Defining technical communication in professional world. Focuses on audience, purpose, ethics, global communication, and collaboration. Journal articles, student/professional organizations, guest presentations, interviews. Career assessment inventories, in-class/electronic discussions, oral presentations, feasibility report.

WRIT 3029W - Business and Professional Writing (WI)
(3.0 cr; =[ENGL 3029W]; Prereq-Daily access to e-mail; fall, spring, every year)
Practice writing for various purposes/audiences. Using styles, tones, and organizational elements. Potential genres include proposals, reports, Web content, e-mail, executive summaries, job search portfolios. Work-

place collaboration, issues of professional literacy.

WRIT 3101 - Writing Arguments
(3.0 cr; A-F or Aud, fall, spring, every year)
Classical appeals of ethos, logos, and pathos. Arguments of different styles and complexity. Logical fallacies, credibility issues. Using primary/secondary research. Readings may include essays on social policies/problems.

WRIT 3108 - Gender and Ethnicity and the Rhetoric of Science and Technology (CD)
(3.0 cr; Prereq-soph or jr or sr or #; spring, every year)
How cultural gender roles are affected by science/technology. Influence of gender roles on scientific/technological thinking (e.g., communication strategies, language, image). Values/goals of past/present scientific/technological communities.

WRIT 3152W - Writing on Issues of Science and Technology (C/PE, WI)
(4.0 cr; Prereq-1301 or equiv; A-F or Aud, fall, spring, every year)
Ethical, social, and political challenges created by science/technology. Persuasion strategies through which experts, political decision-makers, and citizens meet these challenges. Controversies such as cloning, organ transplantation, pollution, ozone depletion.

WRIT 3221W - Communication Modes and Methods (C/PE, SSCI, WI)
(4.0 cr; Prereq-Soph or jr or sr or #; fall, spring, every year)
Theories/practices of interpersonal, small group, organizational, and scientific, and technical communication. Lecture, discussion, simulations, small group work.

WRIT 3244 - Critical Literacies: How Words Make the World
(3.0 cr; Prereq-Soph or Jr or sr; A-F or Aud, spring, every year)
Critical literacy: set of ideas about reading/writing as practices of citizenship. Current thinking about critical literacy. Practice in reading/writing as active citizen.
Effective: Spring 2010

WRIT 3257 - Scientific and Technical Presentations
(3.0 cr; Prereq-COMM 1101 or #; fall, spring, every year)
Oral presentation skills for scientific or technical topics. Visual communication, audience analysis, organizing a presentation, presenting complex material. Emphasizes use of computers.

WRIT 3270 - Special Topics
(1.0 - 3.0 cr [max 3.0 cr]; fall, spring, offered periodically)
See Class Schedule.

WRIT 3291 - Independent Study
(1.0 - 3.0 cr [max 6.0 cr]; Prereq-#, Instructor consent; fall, spring, summer, every year)
Supervised reading and research on topics not covered in regularly scheduled offerings. Intended primarily for upper division undergraduate students.

WRIT 3302 - Science, Religion, and the Search for Human Nature (OH)
(3.0 cr; Prereq-Soph or jr or sr or #; fall, spring, every year)
Relationship of religion and science as ways of explaining human nature/behavior. Focuses on 19th century: impact of Darwin's theory and historical study of Biblical texts. Existentialism and political ecology as modern efforts that problematize "human nature."

WRIT 3315 - The Land in American Experience (CD, OH)
(3.0 cr; fall, spring, every year)
Land in America as idea and as actual space. History of cultural values and the meanings land holds for us.

WRIT 4501 - **Usability and Human Factors in Technical Communication**
(3.0 cr; Prereq-Jr or sr or grad student or #; spring, every year)
Principles/concepts of human factors/usability testing. Developing objectives, criteria, and measures. Conducting tests in lab, field, and virtual environments. Using software programs to analyze qualitative/ quantitative data.

WRIT 4562 - **Theory and Practice in International Business Communication (IP)**
(3.0 cr; Prereq-3562W or equiv; A-F or Aud, fall, spring, offered periodically)
Theories/practice in international/intercultural scientific, technical, and business communication. Cultural metaphors, research studies. Interviewing people from other cultures, including international business managers. Case studies.

WRIT 4573W - **Writing Proposals and Grant Management (WI)**
(3.0 cr; Prereq-[[3562W or equiv], [[jr or sr] STC major or grad student]] or #; A-F or Aud, fall, spring, offered periodically)
Research funding sources. Interpreting RFP or program announcement. Letters of intent. Grant preparation, following guidelines of RFP or program announcement. Proposals for nonprofits or research/business. Using Microsoft Project.

WRIT 4662W - **Writing With Digital Technologies (WI)**
(4.0 cr; Prereq-Jr or sr or grad student or #; A-F or Aud, spring, every year)
Creating multimedia, hypertext, online help, and Internet documents. Linear/nonlinear design, linking, reading/editing online. Projects in scripts, online support, and mark-up language.

WRIT 4980 - **Senior Seminar in Writing Studies**
(3.0 cr; Prereq-Major in [scientific/technical communication or writing studies], upper div; A-F only, fall, spring, every year)
Research questions/topics in writing studies. Combines theory, history, and writing practice. Theme/problem in writing studies. Semester paper. Topics listed in Class Schedule.
Effective: Spring 2010