

MSC 1003: The Rhetoric of Science

Information, Media and Communication Literacy for the Sciences

“Whatever words we utter should be chosen with care for people will hear them and be influenced by them for good or ill.”—attributed to the Buddha, from a translation by Dwight Goddard

Start:	September 13 th , 2016	Time:	1pm – 4pm
Day:	Tuesdays	Location:	TBA
Director(s):	Joseph Ferenbok, TRP Director	Course Facilitator:	Sandy Marshall
		Teaching Assistant:	TBA

Academic Rationale: To allow students to explore strategic approaches and media channels to communicating scientific and biological knowledge for effective engagement with target audiences.

Learning Objectives: At the end of this course students should be able to demonstrate:

- The ability to adjust communications to address different audiences;
- To Identify key debates that result from conflicting stakeholder views;
- To Communicate Complex ideas effectively; and
- To demonstrate a variety of reflective approaches to writing challenges.

Outcomes To accomplish the learning objectives, the students will be engaged in a seminar style course that will require them to produce:

- A sample writing portfolio;
- Small scale collaborative communication project in targeted community / group;
- Demonstrate effective communication skills via an academic paper, ethics proposal, or other form of substantive individual writing related to practices associated with translational research;

Description: This course serves as an introduction to issues in scientific communications. The course is designed with a focus on communicating complex concepts to a range of target audiences to accomplish specific outcomes. The course is divided into three main themes: Communication Strategies, Contexts, and channels.

Learning by doing is the best way to improve communication techniques. To this end, students will be asked to write a weekly assignment in their journals. Each week the nature of the journal assignment will change slightly and students will be encouraged to experiment with style,

delivery, organization and voice for their journaling. Students will also work together to identify a Knowledge Translation problem and in collaborative teams will be asked to communicate complex scientific concepts that help positively impact human health of targeted constituents.

Readings and media assignments in the course will include a mix of theory and practical examples of health and science communication and will be posted to the student website associated with this course no less than one week prior to the relevant lecture.

Teaching Methods: In this course teaching will be performed through a variety of methods, including (but not limited to): lectures, audio/visual presentations and individual and group assignments. Instruction will be supplemented by required tutorials, multimedia presentations and class discussion based on readings and presented materials.

Course Values: This is a professional Master's program course and students have a broad range experiences. Students are expected to use the experiences and knowledge they bring into the course to help define their learning objectives, contribute to the course content, and complement their own learning experience and that of their classmates.

Learning requires the active participation of the learners, so while the Course Director(s) provide an outline and structure for the course; present a framework for seminars; define assignments and assign readings; it is ultimately the active participation of learners that will largely define the scope of their learning and assignments in this course.

We learn together, from one another, and relate the knowledge learned through the course to our past experiences and imagined future opportunities. So, all participants are expected to read the articles prior to class, ensure consistent attendance and participation. Students are expected to contribute and share relevant ideas, readings, materials and insights, that may contribute to their individual and the collective learning experience.

Course Structure The course will meet for three hours each week for twelve weeks, and be generally structured around a 1-hour topic discussion, 1-hour guest speaker or workshop, and 1-hour group collaborative activity time.

Grading & Assignments

The course will include assessment of individual and group work. Each assignment is described below and students will receive more detailed assignment instructions in class.

Marking Scheme	Assignment	Weight	Type	Due Date
	Writing Post	30%	Individual	On Going
	Paper	20%	Individual	December 13th
	Project Brief	20%	Collaborative	November 1

Project Presentation	15%	Collaborative	Dec 6, 2016
Participation	15%	Individual	Ongoing

Assignment Details

Writing Post (30%)

Starting in week two Students will be asked to write 250 – 300 words in the form of a blog post. Each week the assignment will challenge students with a different strategy, context or channel for writing. Students will get an opportunity to explore different forms of delivery, style and argumentation using different registers and voices for a range of audiences.

The text is to be submitted as a post online to the student website associated with this course.

The post is to be assigned to the category “MSC1003”, include a relevant “Featured image” and be posted no later than the Friday of that week.

In the following session, students will spend time critiquing one or two posts from group members based on content, style and persuasiveness. Critiques are to be recorded as comments to the posts. **Post authors may ‘edit’ their posts** based on comments from their group members (or other members of the class). At the end of the term each student will select their top 6 posts as writing samples and submit them for evaluation (5% each post).

Paper (20%)

Students are asked to write a Rhetorical Analysis of a Scientific / Medical campaign, Paper or Policy, or range of communications (relevant to course themes) that attempt to make a statement to an intended audience. To write the analysis you will need to determine how the author(s) make their arguments and whether or not that argument was successful.

Students are asked to identify the speaker, occasion, audience, purpose and subject of the material(s) they are analyzing; examine the nature of the appeals (ethos, logos, pathos); analyze the stylistic details of the materials (analogies, repetition, imagery, diction, tone, etc.); and form an opinion based on the gathered information of the choices made and who they serve to achieve the stated purpose. Students are asked to provide evidence and support for their analysis and to maintain an objective tone in the discussion.

Your paper should be based on reputable sources, thesis driven, 6 – 8 pages (excluding any appendices) using a standardized academic format and citation practices (preferably MLA or APA). The reputable sources should include at least 5 peer reviewed academic papers.

**Communication
Project Brief
(20%)**

In small groups of 3 or 4, students are asked to identify a community group or organization that is or could be involved in a ‘translational’ health science campaign. Students will be asked to prepare a brief or proposal for a communication project that helps ‘translate’ a complex health concept to a target group. Students will be asked to engage with community partners (industry, government, not-for-profit, etc) to translate knowledge that helps improve some aspect of health. Students are asked to prepare a design brief outlining the problem, scope, target audience, and communication strategy for the project.

For example, a group might approach CAMH to develop a campaign for the early diagnosis of mental health issues among children. The campaign might be specifically targeted at primary school teachers or personal physicians. Alternatively, students could work with a patient group or organization to develop a campaign to encourage bench project for an under investigated condition or syndrome.

Students will also be asked to make a presentation about their projects at the end of the semester. Based on the project experience, students will make a 15-minute presentation using a medium and format of their choice. The presentation must state the original problem / issue, outline the stakeholders, define the target audience, describe / present their solution(s), and discuss the project outcomes.

Students should track all meetings and prepare a design brief to outline the scope and aims of the project. Students must demonstrate community involvement and networking through the project and must develop, in addition to the communication materials and strategy a project report and presentation.

**Participation
(15%)**

Participation will be based on a student’s contribution to discussions in each session and class activities. Please note: attendance is not participation, but without being present you can’t participate.

Late assignments will lose 3% per day. Assignments over a week late will not be accepted and will receive a grade of 0. Assignments that do not meet minimum university expectations will not be accepted for marking. Attendance is required and participation will be based on how students interact in class and online and engage with the materials read and presented in class. Attendance is not considered as participation but a requirement of thereof.

Detailed Class Schedule:

September 13	<p><u>What is Communication? The arbitrariness of Meaning.</u> This seminar will introduce that idiosyncrasies and opportunities of communicating complex scientific concepts to a range of technical and non-technical audiences. The Lecture will provide students with an overview of the term, introduce the core themes and issues that will be explored throughout the semester and link how the tools of persuasion relate to establishing scientific fact and changing health policy.</p>
September 20	<p><u>Health Communication: Message Framing & Persuasion</u> Communicating complex scientific (read health) ideas can be challenging. But sometimes the challenge can be not in the presentation of the science but in the packaging of the message itself. In preparing for the following session, in this session we will look at different ways of packaging communication for knowledge translation and persuasion in health care and health promotion. We will also begin looking at your first communication challenge by reviewing instructions for packaging your message for your Dr’s Notes article.</p>

	<p><u>2. Communication Challenge(s):</u> Brief: preparing a pitch for Dr's Notes: Recent articles: https://www.thestar.com/search.html?q=doctors%20notes</p> <p><u>3. Discussion of Community Based Knowledge Translation Project.</u></p> <p><u>Weekly posting starts in this session:</u></p>
September 27	<p><u>Workshop: Tools for Critique:</u> 1) Writing style: structure, flow, persuasion 2) Grammar, spelling, typos, formatting 3) Giving and receiving feedback</p> <p><u>What is Rhetoric?</u> This discussion will give a broad overview of rhetorical traditions from Aristotle to modern times and look at how rhetoric is used as a tool in science to establish theories and beliefs.</p> <p><u>Guest Facilitator: Jane Freeman</u></p>
October 4	<p><u>1. Arguing and Fallacies:</u> This session will engage with the question of “what is an argument?” We will begin by looking at how classical rhetoricians divided a text for maximum persuasion; look briefly at ethos, pathos and logos; and then look at how this may be applied across a number of media examples. But the bulk of this session will focus not on how to argue, but on how NOT to argue—we will look at the traps of bad (or unreliable) argument, and learn to identify some errors in reasoning or ‘logical fallacies’.</p> <p><u>2. Writing Critique: Post 1</u></p> <p><u>3. Pitching Article Ideas</u> 1-minute pitch; with 1-minute feedback; 3-4pm</p> <p>Guest Facilitator(s): Carolyn Morris and/or Heidi Singer</p>
October 11	<p><u>Invention: Selecting a Topic</u> Selecting a topic is often the most challenging of any activities in the writing process. Figuring how what you want to say should actually be thought of as a process that, according to Aristotle, involves “discovering the best available means of persuasion.” This session will look at how rhetoric can be used to convince target audiences of particular ideas / issues.</p> <p>As an iterative process invention is more than just ‘picking the topic’, it is an often time consuming process of trying to understand your evidence, audience and your argument. This session will focus on the exploration of topic ideas and strategies to help you get your thoughts and arguments.</p>
October 18	<p><u>Disposition: Planning Your Argument</u> This lecture will explore the arrangement of arguments. The session will start with the classical arrangement of texts into six parts; the arrangement and structure of argumentative (or thesis-driven papers); and will explore how the arrangement of your ‘story’ and facts can impact the strength and quality of your writing.</p>

October 25	<p><u>Elocutio: style, Impact, Audience & Method</u></p> <p>Style is perhaps the most controversial aspect of Rhetoric in Science. The European Renaissance saw a torrid reaction among many intellectuals of the day against the use of rhetorical argument in science. The feeling was that scientific facts should speak for themselves and any use of embellishment, metaphor, or arrangement even for the sake of clarity and correctness was contrary to the scientific attempts at objective.</p> <p>However more recently, philosophers (of science) including Latour, Kuhn, Derrida and Foucault have demonstrated that “science” and scientific writing are essentially methods of rhetorical writing stylized for particular discourse communities. In this session we will explore both science as a style and style as a tool communicating science.</p>
November 1	<p><u>Proof: Supporting Your Argument</u></p> <p>Aristotle divided knowledge into fact and rhetoric. Rhetoric is often essential to establishing facts. What evidence is presented, what evidence is held back and how evidence is presented is often key to establishing an argument or making one persuasive. This session will look at the many ways ‘facts’ are used in Science to understand strategies for supporting the translation of knowledge to specific audiences.</p> <p>Assignment: Project Brief</p>
November 15	<p><u>Actio: Delivering your Argument</u></p> <p>Although there are often many ways to deliver a message using many types of media one medium that seems to continue to resonate with people is ‘narrative’. Telling a good story, is often the best way to persuade people. Storytelling takes many forms, but quite often the difference between getting a grant, winning a pitch competition or communicating health science discoveries is the ability to tell a good story.</p> <p><u>Guest Facilitator Daniel Newman</u></p>
November 22	<p><u>Media & Channels</u></p> <p>Oral talks and written texts have dominated communication for most of human history to date. But technological mediation has given rise to mass (and more recently) social media, and these channels have changed relationships between producers and consumers of information. This session will focus on the channels of communication as strategic choices to engage end users with health and health care issues. From websites to videogames, AR to tweets, how do the channels of communication change its messaging?</p>
November 29	<p><u>Knowledge Translation & Public Policy</u></p> <p>This session will focus on Public Policy as an expression of Knowledge Translation. We will look at the strategies that we have discussed to date and try to understand how framing and the tools of persuasion pay a role in the development of policy as an example of scientific rhetoric, and knowledge translation as a domain of rhetoric for the impact of science.</p> <p><u>Assignment Due: Project Presentations</u></p>
December 6	<p><u>Project Presentations & Semester Wrap-up</u></p>
December 13	<p><u>No Seminar</u></p> <p><u>Paper Due</u></p>

Classroom
Management:

1. **Readings:** It is important to complete the required readings before your class in

order to fully benefit from the class activities. **Core readings will be posted on the associated Student website no less than one week before the relevant session.**

2. **Participation and Attendance:** Discussion and interaction in the classes are important ways to learn. Sharing your experiences and ideas with your classmates is central to your learning experience in this course, particularly in a seminar. As such, you should attend and participate in every class.

Students are expected to come to class on time, turn off cell phones and to use laptops in class for note-taking only (not for web surfing, email, viewing movies etc.). Students being disruptive or preventing other students from participating in the class will be asked to obey the rules or leave the class.

3. **Late Assignments, Extensions and Missed Term Tests:** You are expected to complete assignments on time. There will be a penalty for lateness of 3% deducted per day and work that is not handed in one week after the due date will not be accepted.

As of September 2010, students are required to declare their absence on ROSI, in order to receive academic accommodation for any course work such as missed tests, late assignments, and final examinations.

Deadline extensions will be granted only for a compelling reason and with appropriate documentation and students should contact instructors immediately--no later than the due date, if a deadline cannot be met.

4. **Religious Observance:** Information about the University's Policy on Scheduling of Classes and Examinations and Other Accommodations for Religious Observances is at

<http://www.viceprovoststudents.utoronto.ca/publicationsandpolicies/guidelines/religiousobservances.htm>.

Please Note: Every attempt will be made to follow this syllabus, but its contents are subject to change
