"Intersections: Between the Sciences and the Humanities"

This special section of English 109 introduces students in the Faculty of Mathematics to the styles, structures, and strategies of effective communication in the academy and the workplace. In order to observe these strategies of persuasion at work in texts and documents, course readings and assignments will focus on the subtle but essential role of rhetoric – the art of persuasion – in the construction of scientific and technical knowledge (with examples from physics (Heisenberg), chemistry (Curie), biology (Watson and Crick), mathematics (Leacock), engineering (Petroski), computer science (Gould), natural history (Darwin), and environmental science (Thoreau)). Texts: Anderson, *Technical Communication* (TC); Lunsford and Connors, *The New St. Martin's Handbook for Writers* (HW); Scott, Perkins, and Rothwell, *Intersections: Essays in the Sciences and Humanities* (I).

Requirements and Grades:
30% Oral Assignments (2)
40% Written Assignments (3)
30% Participation (Regular attendance at lectures and tutorials; polite and informed participation in class discussion, assignments, and collaborative projects; timely completion of all reading and writing assignments).

Guidelines for Essays and Presentations: TBA

Academic Integrity: Plagiarism, the "act of presenting the ideas, words or other intellectual property of another as one's own," and any other form of academic misconduct, will be prosecuted to the fullest extent University regulations will allow (which may include expulsion from the University of Waterloo).

Syllabus:
Week of January...
7 Introduction
14 Overview of Oral and Written Communication
   SM: Chapter 1; TC: Chapter 1
   I: Language: Orwell, "Politics and the English Language"; Twain, "Political Economy"

21 A Rhetorical Approach to Communication
   SM: Chapter 2, 43; TC: Chapters 3, 6

28 The Rhetorical Situation
   SM: Chapters 50, 51, 52; TC: Chapters 4, 16

Week of February...
4 Style: The Sentence (NOTE: Assignment 1 due in lecture)
   SM: Chapters 19-23; 27; TC: Chapter 7

11 Structure: The Paragraph
   SM: Chapter 6; TC: Chapter 7 (194-215)
   I: Physics: Heisenberg, "What Is An Elementary Particle?"; Ingram, "The Atom’s Image"
Problem
18 Winter Break

25 Strategy: Invention (NOTE: Assignment 2 due in lecture)
SM: Chapter 3; TC: Chapter 3

Week of March...
4 Strategy: Arrangement
SM: Chapter 6; TC: Chapters 8
I: Natural History: Darwin, The Origin of Species; Hardison, “Charles Darwin’s Tree of Life”

11 Strategy: Argument (NOTE: Assignment 3 due in lecture)
SM: Chapter 5; TC: Chapter 6
I: Biology: Watson and Crick, “Molecular Structure of Nucleic Acids”; Wilmut, “Viable Offspring Derived From Fetal and Adult Mammal Cells”; Kahn, “Clone Animals...Clone Man?”

18 Strategy: Persuasion
SM: Chapter 5; TC: Chapter 5

25 Strategy: Persuasion (NOTE: Assignment 4 due in lecture)
SM: Chapter 4; TC: Chapter 13

Week of April...
1 Conclusions
NOTE: Assignment 5 due Monday, April 8, by 12:00 noon, in your TA’s mailbox in Hagey Hall