Calendar Description. The authority of science derives from the presumed objectivity, social detachment and universality of scientific knowledge. However, because scientific institutions are embedded cultural constructs, the knowledge they produce is very much a reflection of social organization, priority and power. This political understanding of science has translated into fertile critiques of science from feminist, queer, ethnic and religious perspectives, which invite us to reflect on how science identifies itself and how we identify with science. Through selected readings and discussion, this course will explore some of these critiques and will appraise the challenge they present to scientific authority.

Learning Objectives

First and foremost, this is an inquiry-based course. The objective, therefore, is to get you to engage with science as a social construct: to think about some of the ways in which scientific work is shaped by cultural, political and economic forces; and to reflect on science as an ideological lens that can focus or distort our understanding of the world.

The selected readings do follow a certain internal logic, with successive weeks’ readings building on earlier themes, but they do not presume to be an exhaustive, coherent or balanced rendering of the scholarly canon. They are, however, stimulating. It is not the intention of this course to make you an expert in the field of science studies; the objective is to debate and think deeply about the issues and questions these fertile readings inspire.

We aim to achieve these objectives in two ways. During the first half of the term, our weekly meetings will give you the chance to discuss the readings with your peers—to refine your thinking, exorcise your prejudices and ask new questions. This exchange, in turn, will help you (either individually or in small groups) to flesh out the inquiry question that will occupy you during the second half of the semester.
Evaluation

Evaluation in this course will comprise two elements: (i) participation in class discussion (40%) and (ii) completion of a final research project (60%). We (i.e. “I” as “instructor” and “you” as “students”) will share responsibility for evaluation.

Participation. As class discussion will primarily drive learning in this course, you are expected to prepare thoroughly for each class by completing and reflecting on the assigned readings. These readings are not onerous in volume (about 50 pages total per week), but they should be challenging in content. To help you organize your thinking about the material, you are asked to submit a one-page reflection at the beginning of each seminar. These reflections should record the reactions, questions and connections the readings inspire; as working documents intended to frame and spur class discussion, the reflections will not be formally evaluated, but will simply be credited for satisfactory completion.

Projects. Either individually or in groups of no more than two, you will research, write about and present a relevant inquiry question of your design. The readings during the first eight weeks of class should help you to develop the scope of your inquiry, which will initially be submitted as a proposal for discussion and appraisal by your peers. You will then spend four weeks researching your topic and assembling your findings into a comprehensive product of your design. This deliverable, which will be shared with and evaluated by your peers, will form the basis of a presentation during the final week of class. The presentation should not simply be a synopsis of the research discussed in your final deliverable—this would prove repetitive—but should build on it in an innovative and engaging way.

Syllabus

Structuring a reading list for this course has been a significant challenge. Science criticism affords a rich literature, and it is impossible to represent this multiplicity of perspectives in a single course. However, in the interest of providing as much breadth as possible (so that you have a relatively sound footing as you embark on your independent study), you have been assigned short essays or chapters by authors representing diverse critical traditions/perspectives—many broadly classified as “feminist” or “postmodern”, where the wealth of science criticism is philosophically and politically located. You must therefore read with the following caveat: the readings have unavoidably been removed from their original context, excerpted from collections of essays—or indeed from monographs—that otherwise help to shape their meaning. The only way around this conundrum is to read the original works in their entirety, but this would be an unreasonable expectation. Please be mindful of this interpretive limitation as you digest the syllabus.

Please note that the syllabus has been published as Custom Courseware through the McMaster Bookstore.

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1 The possibilities here are virtually limitless: an essay, a poster, a formal research proposal, a radio programme, etc.—the only proviso is that the product must convincingly capture three months of sustained research, reflection and production (speak to me if you wish to propose something particularly unusual).
STATEMENT ON ACADEMIC INTEGRITY

Academic dishonesty consists of misrepresentation by deception or by other fraudulent means and can result in serious consequences, e.g. a grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: “Grade of F assigned for academic dishonesty”), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various kinds of academic dishonesty please refer to the Academic Integrity Policy, specifically Appendix 3, located at http://www.mcmaster.ca/senate/academic/ac_integrity.htm.

The following illustrates only three forms of academic dishonesty:

- Plagiarism (e.g. the submission of work that is not one’s own, that has not been adequately referenced, or for which other credit has been obtained);
- Improper collaboration in group work (e.g. sharing credit for collective work in which your participation was negligible or disproportionately small); and
- Copying or using unauthorized aids in tests and examinations.

STATEMENT ON INTRA-COURSE MODIFICATIONS

The instructor, program and the university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in extreme circumstances. If modifications become necessary, reasonable notice and communication with the students will be given. Students will be provided with an explanation and an opportunity to comment. It is the responsibility of the student to check their McMaster email and the course website/LearnLink weekly during term. Any significant changes will be made in consultation with the BHSc Assistant Dean.
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<tr>
<th>Week 1</th>
<th>8 January</th>
<th>INTRODUCTION: SCIENCE AS AN OBJECT OF INQUIRY</th>
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<td>How is science perceived?</td>
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<th>Week 2</th>
<th>15 January</th>
<th>THE CONSTRUCTION OF SCIENCE: EPISTEMOLOGICAL APPROACHES</th>
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<td>How has science shaped, and been shaped by, history?</td>
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<th>Week 3</th>
<th>22 January</th>
<th>SCIENCE AS AN IDEOLOGICAL AGENT</th>
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<td>How is science political?</td>
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<th>Week 4</th>
<th>30 January</th>
<th>FEMINIST AND POSTCOLONIAL SCIENCES: CRITICAL APPROACHES</th>
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<td>How is a multiplicity of voices challenging scientific unity?</td>
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<th>Week 5</th>
<th>5 February</th>
<th>CLASS CANCELLED</th>
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Week 6
12 February

FAITH AND SCIENCE: BRIDGING SOLITUDES
Are faith and science incompatible ways of knowing?


19 February

READING WEEK

Week 7
26 February

IMPLICATIONS (0830-1000)
How might the scope, institutions and practice of science be reconfigured?


DISCUSSION OF PROJECT PROPOSALS (1000-1120)

Note: One-page proposals must be submitted to LearnLink by noon Sunday 25 February.

Weeks 8 to 10
5 March to 19 March

INDEPENDENT STUDY
(No classes; meetings with Ryan may be arranged as needed.)

Note: Projects must be submitted to LearnLink by noon Friday 23 March.

Week 11
26 March

PROJECT PRESENTATIONS

Week 12
2 April

PROJECT PRESENTATIONS (AS NEEDED) AND COURSE FINALE