History
CARLETON UNIVERSITY

Carleton University	**Department of History Course Outline**

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COURSE:		**Political History in Canada HIST 4305A** **Science, Technology, Engineering and Mathematics (STEM) in the History of Canadian Society and Policy**
TERM:		Fall 2021
PRECLUSIONS:		None
CLASS:	**Day & Time:**	Monday 08:30-11:30
INSTRUCTOR:		Dominique Marshall https://carleton.ca/history/people/dominique-marshall/
CONTACT:	**Office:**	Virtual Office
	Office Hrs:	Tuesdays 2:30 – 4:30 or by appointment
	Telephone:	613-520-2600 extension 2846
	Email	dominique_marshall@carleton.ca
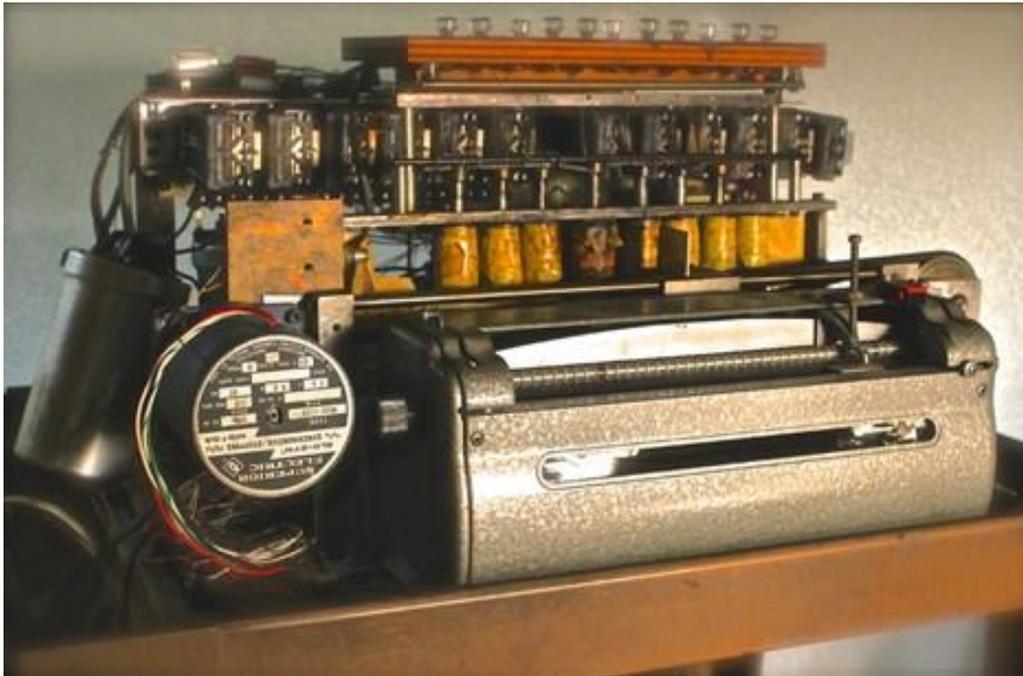
Converto-Braille (c.1972) Invented by Gatineau engineer Roland Galarneau from his basement, his text to speech machines were crucial in the making of today's voice activated interfaces with computers. Galarneau Computerized Braille Printer (1972), artifact no. 1987.0272.001, Collections Supplementary Report, Canadian Science and Technology Museum, Ottawa ON, Canada. http://techno-science.ca/en/collection-research/collection-item.php?id=1987.0272.001 To know more, see https://envisioningtechnologies.omeka.net/exhibits/show/roland-garlaneau-and-the-conve/the-converto-braille--a-transf

I.   Course Description

Content:

An exploration of the complex history of STEM in Canada. It addresses public uses of science in Canada, Indigenous and traditional knowledge, knowledge, transnational relations of innovations, dissemination, education, as well as major discoveries. It will focus on selected elements of STEM chosen in collaboration with students.

Format and workload:

Synchronous seminars and asynchronous written discussions. Each week, in a weekly cycle starting on Tuesdays, there will be 9 hours of work:
- 3 hours of preparatory work (reading, recordings)
- 3 hours of researching and writing (term project, transnational group project, forum posts)
- 3 hours of in class meeting on Mondays (discussions - including one hour of leading the seminar for each student; hands on workshops; transnational group work).

Aims:

The course asks students to learn by doing: by simultaneously reading (seeing, listening or watching), evaluating, explaining, writing, researching, making, revising and reflecting thoughtfully. The course will help students:
1. Acquire basic and recent **knowledge** about the history of STEM in Canada. This includes key concepts, events, people, points, arguments, and generalizations.
2. Acquire keys to make sense of today's STEM in Canada, their mutations in a pluricultural society, their position in Canada and the world. That is to say, keys to uncover the history **behind the headlines**, some distortions in the media version of history, and the roots of everyday customs and objects.
3. Learn and use ways to pay a special attention to lost and retrieved **memories**.
4. Learn and use the main **tools for historical research**, and the skills use them well, and develop as an **independent researcher**.
5. Acquire skills to **solve historical problems** including the analysis and interpretation of historical documents, and the ability to **make distinctions** in the face of complex questions.
6. Learn and use the basics of "**How do we know**" the past: to question myths in the history of STEM effectively; to be mindful of the history of history('historiography'); to make links with history learned otherwise, especially family and community memories.
7. Use the main **tools to organise historical findings**.
8. Use the main **tools to present history** in writing, orally, visually, digitally.
9. Practice the **collaborative** nature of knowledge and good ways to work collaboratively.
10. Practice the **transnational** nature of knowledge production and good ways to work transnationally.
11. Make links between history and **other disciplines**.
12. Be sensitive to the **ethical issues** of historical work.

NOTE: These aims have been written with the help of the work of Laurence De Cock, Peter Stearns, Shana Agid, the Learning Outcomes of the Department of History, the Statement on Research Ethic of the Canadian Historical Association, and the Statement on Standards of Professional Conduct of the American Historical Association.

New digital learning environment – notes on Brightspace:

From CuLearn to Brightspace: The course will take place in the Brightspace Learning Management System. You will be among the first students to experience the Brightspace environment. Brightspace is the digital learning environment that now replaces CuLearn/Moodle at Carleton, from May 2021. Brightspace can be accessed from a web browser on most internet enabled devices, including laptops, Chromebooks, tablets, and smartphones, by going to: brightspace.carleton.ca. The Brightspace Pulse App is also available for iPhone and Android devices. However, the App is best used to review grades and deadlines. The App is not the best way to review the course content. To explore course content, please use a web browser instead.

Training materials and resources: have been added for you in the "welcome to the course" module of this course. Read the information about Brightspace, review the introductory video to familiarize yourself with the Brightspace interface.

Support: Brightspace Support is available via phone/email/chat 24 hours a day, 7 days a week, 365 days a year. Information about Brightspace Support is available in the Brightspace course in the D2L support widget. A Brightspace Student Support website is also available: https://carleton.ca/brightspace/students/
For more information about Online Learning, including resources, strategies, and training modules, visit Carleton.ca/online/.

II.   **Readings:**

There is no textbook for this course. Readings will be available through the library course reserve system (ARES), and recordings through Brightspace.

III.   **Course Calendar:**

The Calendar provides the main reading and deadlines for each module. It does not list the supplementary readings and recordings which will be announced on Brightspace at the beginning of each module.

Module I: Introductions & the Historiography of STEM
Week 0: Sept. 8 – 13
Week 1: Sept 14 – 20

Read and watch (4 hours)
- Syllabus (before Mon. 13 Sept.)
- *Canadian Encyclopedia*, selected articles TBA (before Thu. 16 Sept.)
- *Palgrave Dictionary of Transnational History*, selected articles TBA (before 16 Sept.)
- How to research the MacOdrum Library on the history of STEM (before Sept. 20)

Research and Write (6 hours)
- Online Forum Discussion to get to know each other: post due Sun. 12 Sept. (1 hour)
- Online Forum Discussion on the Historiography of STEM: post due Thursday Sept. 16 (2 hours)
- Individual research on theme of student lead seminar: due before Mon. Sept. 20 (3 hours)

Meet and discuss (6 hours)
- Mon 13 Sept.
    o 8: 30 – 9: 55   Class Seminar: Instructor-Lead Introduction & explanations
    o 10:00 – 11:25   Breakout group rooms: Introductions & preparations for student-lead seminars
        ▪ Instructor meets with Victorian Science Group (1 hour)
- Mon 20 Sept.
    o 8: 30 – 9: 55   Class Seminar: Instructor-Lead on the historiography of STEM
    o 10:00 – 11:25   Breakout group rooms: Further preparations for student-lead seminars
        ▪ Instructor meets with Science and the Environment (45 min.) & with Artificial Intelligence Group (45 min.)

Module II: Victorian Science
Week 2: Sept. 21 – 27
Week 3: Sept. 28 – Oct. 4

Read and Watch (6 hours)
- Berger, Carl. *Science, God, and Nature in Victorian Canada* Toronto, University of Toronto Press, 1983. (before post of Sept. 26)
- 1 of the texts chosen by seminar leaders TBA (before post of Sept. 26)
- Students' first posts in Online discussion Forum (from Sept. 27, before Seminar of Oct. 4)

Research and Write (6 hours)
- For members of the Victorian Science Lead Group:
    o Introduce online forum (Sept. 21)
    o Prepare student lead seminar (for Oct. 4)
- For the members of the other two group
    o Online Forum Post on Victorian Science (Sun. 26 Sept.)
    o Research student lead seminar

Meet and Discuss (6 hours)
- Mon. 27 Sept.   Workshop on Individual Research Project
    o 8: 30 – 11:25   Work on DX collection
        ▪ Introduction to the collection and the objects by DX team
        ▪ Choice of objects
        ▪ Early work of research

- Mon. 4 Oct.   Seminar Meeting
    o 8: 30 – 11:25   Student-lead on Victorian Science

Module III: Science and the Environment
Week 4: Oct. 5 – 11
Week 5: Oct. 12 – 18

Read and Watch (6 hours)
- Conversation with Jill Campbell-Miller on Canadian Engineering and Indigenous Knowledge in Indian and the North West Territories (October 10)
- Carleton University Indigenous bundle on "Environment Relations" (October 10)

-   1 of the texts chosen by seminar leaders TBA *(October 10)*
-   Students' first posts in Online discussion *Forum* (October 17)

Research and Write (6 hours)
-   For members of the Science and the Environment Lead Group:
    o   Introduce online discussion (Oct. 5)
    o   Prepare student lead seminar (for Oct. 18)
-   For the others
    o   Online Forum Discussion on Science and the Environment (Oct. 11)
    o   Research student lead seminar

Meet and Discuss (6 hours)
-   Mon. Oct. 11   No Meeting - Thanksgiving
-   Mon. Oct. 18   Seminar Meeting
    o   8: 30 – 11:25   Student-lead on Science and the Environment

Module IV: Artificial Intelligence
Week 6   19 October – 1 November
Fall Break   25 October - 29 October
Week 7   2 November – 8 November

Read and watch (6 hours)
-   Shannon Lecture of Teresa Scaccia (October 31)
-   TBA chosen by seminar leaders (October 31)
-   Students' first posts in Online discussion Forum (October 7)

Research and Write (6 hours)
-   For members of the Artificial Intelligence Lead Group:
    o   Introduce online discussion (October 19)
    o   Prepare student lead seminar (November 8)
-   For the others
    o   Online Forum Discussion Post on Science and the Environment (October 31)
-   For all
    o   DX draft Thursday October 4

Meet and Discuss (6 hours)
-   Mon. Nov. 1   Interlude: Workshop on Individual Research Project
    o   8: 30 – 11: 25   Work on DX collection
-   Mon. Nov. 8   Seminar Meeting
    o   8: 30 – 11:25   Student-lead on Artificial Intelligence

Module V: Histories of STEM, humanitarianism, and solidarity – Cooperation with JFK Institute
Week 8   9 November – 15 November
Week 9   16 November – 22 November
Week 10   23 November – 29 November
Week 11   30 November – 6 December

Read and watch (12 hours)
- General readings on humanity. Solidarity and science TBD (3 hours)
- Readings towards groups project chosen by groups in consultation with Instructors (9 hours)

Research and Write (12 hours)
- Proposal Nov. 8
- Draft Recipro post November 29
- Recipro post December 6

Meet and Discuss (12 hours)
- Monday Nov. 15
    o 8:30 – 9:55   Introduction to transnational collaboration
        ▪ Introduction to Recipro
        ▪ Introduction to humanitarianism, solidarity, and STEM
    o 10:05- 11:25   Group Work
- Mon. Nov. 22   Seminar Meeting
    o 8: 30 – 11:25   Group Work
        ▪ Proposal due: meetings with Instructors
- Meeting Module 10: Monday 29 November
8:30 – 11:30   Student lead presentations on histories of STEM, humanitarianism, and solidarity
    o with Berlin
- Meetings Module 11: Monday 6 December
    o 8:30 – 11:30   Group work

Module VI: Individual Research Project on the History of Design Engineering
Week 12   7 December – 10 December

Read and watch (3 hours)
- Draft of two individual projects

Research and Write (3 hours)
- Feedback on the two drafts (December 9)

Meet and discuss (3 hours)
- Friday Dec. 10
    o 8: 30 – 11:25 Sharing drafts of DX projects results with the DX team

Examinations   11 December – 23 December
    Deadlines: The take home examination (individual project and reflection) are due on
    December 23.

  IV.   **Evaluation, course requirements and assignments**

This course will require your weekly participation and engagement. Participation is mandatory.

Students must submit assignments materials during the allocated time periods and show that they have read the required readings for each activity. Each activity will be an occasion to evaluate your engagement with, and your comprehension of, the reading and recorded materials as well as other students' work. It will measure how well you can recall and access important information, and how you can handle this information autonomously to make links between events over time and within one period, as well as how well you can explain events, and discriminate between elements of the histories you have learned.

When presentations or posts are not marked, it is to preserve the freed om of intellectual exchange and constructive criticism. They are aimed at improving other activities, and it is assumed that a good performance there will increase the mark of the final product.

You must complete all of the components below in order to pass this course. If you have concerns about your ability to complete these assignments in time, contact the Instructor.

Student lead seminar on one theme   **20 %**
- Due dates vary depending on theme chosen by the student (choice due Sept. 13)
- Preparation for online discussion
    o Group meeting with Instructor (Sept. or 20 depending on theme)
    o Individual choice of one supplementary reading or recordings on individual sub-theme
    o Post online introduction to individual thread on individual sub-theme at beginning of Module
- Leading of class seminar: presentation and organization of discussion
    o Group planning and organization
    o Individual oral presentation of individual sub-theme during 5 -10 minutes (including readings and students' posts)
    o Leading of discussion on individual sub-theme during 20-30 minutes

Two individual posts and two seminar participations for the two other themes   **20 %**
- Posts will be of approximately 450 words each. Format will be announced on Brightspace.

Digital Group Post on Recipro (JFK Collaboration) on STEM and international Solidarity   **30 %**
- Template will be provided on November 9
- Group draft due November 29 for class review
- Group final post due December 6

Artifacts Description Sheet on the Design Collection   **20%**
- Template will be provided on September 27
- Draft due October 4.
- Approximately 500 words, plus illustration and further readings
- Peer review of two students' sheets due December 9 (5 %)
- Review of drafts with Design Collection Team December 10
- Final Sheet due December 23 as part of the Take Home Examination (15 %)

Final Reflection (10%)
- Due December 23 as part of Take Home Examination
- Reflection in essay form on the making of the Recipro post and on the materials of the whole course.

Late penalty: Unless otherwise noted, late assignments will be penalized 3% per day (weekends will count as one day). Exceptions will be made for documented medical or other emergencies

NOTE: The modules and assignments have been designed with the collaboration of Kegan Rumig, undergraduate student in History (thanks to the Students as Partner Program), Timothy Di Leo Browne, Educational Technology Development Coordinator, Teaching and Learning Services, the DX collection team, Dr. Soenke Kunkel of the JFK Institute, and the Recipro team.

REGULATIONS COMMON TO ALL HISTORY COURSES

COPIES OF WRITTEN WORK SUBMITTED
Always retain for yourself a copy of all essays, term papers, written assignments or take-home tests submitted in your courses.

PLAGIARISM
The University Senate defines plagiarism as "*presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one's own."* This can include:
- reproducing or paraphrasing portions of someone else's published or unpublished material, regardless of the source, and presenting these as one's own without proper citation or reference to the original source;
- submitting a take home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another's data or research findings;
- failing to acknowledge sources through the use of proper citations when using another's works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence which cannot be resolved directly with the course's instructor. The Associate Dean of the Faculty conducts a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

COURSE SHARING WEBSITES and COPYRIGHT
Classroom teaching and learning activities, including lectures, discussions, presentations, etc., by both instructors and students, are copy protected and remain the intellectual property of their respective author(s). All course materials, including PowerPoint presentations, outlines, and other materials, are also protected by copyright and remain the intellectual property of their respective author(s).

Students registered in the course may take notes and make copies of course materials for their own educational use only. Students are not permitted to reproduce or distribute lecture notes and course materials publicly for commercial or non-commercial purposes without express written consent from the copyright holder(s).

STATEMENT ON CLASS CONDUCT

The Carleton University Human Rights Policies and Procedures affirm that all members of the University community share a responsibility to:
- promote equity and fairness,
- respect and value diversity,
- prevent discrimination and harassment, and
- preserve the freedom of its members to carry out responsibly their scholarly work without threat of interference.

Carleton University Equity Services states that "every member of the University community has a right to study, work and live in a safe environment free of discrimination or harassment". [In May of 2001 Carleton University's Senate and Board of Governors approved the Carleton University Human Rights Policies and Procedures. The establishment of these policies and procedures was the culmination of the efforts of the Presidential Advisory Committee on Human Rights and a Human Rights Implementation Committee.]

GRADING SYSTEM
Letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100 (12)	B = 73-76 (8)	C - = 60-62 (4)	F= 0-49 (0) – Failure: no academic credit
A = 85-89 (11)	B - = 70-72 (7)	D+ = 57-59 (3)	
A - = 80-84 (10)	C+ = 67-69 (6)	D = 53-56 (2)	
B+ = 77-79 (9)	C = 63-66 (5)	D - = 50-52 (1)	

The following additional final course grades may be assigned by instructors:
DEF   Official deferral of final exam (see "Petitions to Defer")
GNA   Grade not available. This is used when there is an allegation of an academic offence. The notation is replaced with the appropriate grade for the course as soon as it is available.
IP   In Progress – a notation (IP) assigned to a course by a faculty member when: At the undergraduate level, an undergraduate thesis or course has not been completed by the end of the period of registration.
WDN   Withdrawn. No academic credit, no impact on the CGPA. WDN is a permanent notation that appears on the official transcript for students who withdraw after the full fee adjustment date in each term (noted in the Academic Year section of the Calendar each term). Students may withdraw on or before the last day of classes.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

WITHDRAWAL WITHOUT ACADEMIC PENALTY
September 30, 2021: Last day for a full fee adjustment when withdrawing from **fall** and **fall/winter (full year)** courses (financial withdrawal). Withdrawals after this date will create no financial change to fall term fees and will result in a permanent notation of WDN appearing on your official transcript.
December 10, 2021: Last day for academic withdrawal from **fall** courses.
April 12, 2022: Last day for academic withdrawal from **fall/winter (full year)** courses.

REQUESTS FOR ACADEMIC ACCOMMODATIONS
You may need special arrangements to meet your academic obligations during the term. For an accommodation request the processes are as follows:

Pregnancy obligation: write to the professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible   after the need for accommodation is known to exist. For more details see https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation: write to the professor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Accommodation for Student Activities: write to the professor with any requests for academic accommodation during the first two   weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf

Survivors of sexual violence: As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: https://carleton.ca/sexual-violence-support/wp-content/uploads/Sexual-Violence-Policy-December-1-2016.pdf

Academic Accommodations for Students with Disabilities: The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your Letter of Accommodation at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website for the deadline to request accommodations for the formally-scheduled exam (if applicable).

PETITIONS TO DEFER
Students unable to write a final examination because of illness or other circumstances beyond their control or whose performance on an examination has been impaired by such circumstances may apply within five working days to the Registrar's Office for permission to write a deferred examination. The request must be fully and specifically supported by a medical certificate or other relevant documentation. Only deferral petitions submitted to the Registrar's Office will be considered.

CONTACTS (613-520-2600, phone ext.)
- Department of History history@carleton.ca
- Registrar's Office (3500) registrar@carleton.ca
- Academic Advising Centre academicadvising@carleton.ca
- Paul Menton Centre (6608) pmc@carleton.ca
- Centre for Student Academic Support – Study Skills, Writing Tutorials, Bounce Back csas@carleton.ca

Application for Graduation Deadlines
- Spring Graduation (June): April 1

- Fall Graduation (November): September 1
- Winter Graduation (February): December 1