

HIST*1250 - Science and Technology in a Global Context

Fall 2024 Course Outline

Section: 01

Credits: 0.50

Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

Calendar Description

This course is an introduction to the culturally specific ways in which science and technology have developed historically from the ancient period through the twenty-first century. Emphasis will be placed on the patterns in which scientific knowledge and practices have traveled and been constructed across cultures and the interconnected but distinct histories of science and technology.

Restriction(s): ASCI*1000.

Department(s): Department of History

Course Description

Science and technology are two of the most powerful cultural forces in human history. This course introduces students to the historical development of science and technology in a global context, from the late ancient period to the 20th century. We will focus on the ways that scientific and technological knowledge, objects, and practices have been used to understand, control, and exploit the natural world. We will examine the trajectories and patterns in which science and technology have circulated between cultures throughout history. We will address the impacts that science and technology have had on society and how political, social, environmental, economic, and cultural contexts have shaped the development of science and technology across the globe.

Lecture Schedule

TuTh 5:30pm-6:50pm in ROZH*101 (9/5 to 12/13)

Instructor Information

Dr. Tara Abraham

Associate Professor, Department of History

Email: taabraba@uoguelph.ca

Office: MacKinnon Extension, Room 10101

Office Hours:

By appointment. Best to email me to arrange an in-person or virtual appointment.

Office Phone: 519-824-4120 ext 56012

Graduate Teaching Assistants

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Textbooks

| Group | Title | Author | ISBN |
|----------|--|-----------------------------------|----------------|
| Required | Science and Technology in World History, Third Edition (Johns Hopkins Dorn University Press, 2015) | James E. McClellan III and Harold | 978-1421417752 |

Learning Resources

Required Resources

The McClellan and Dorn textbook (**Third Edition**) is required and reading assignments will be posted in the lecture schedule. All other resources—the course outline, lecture slides, assignment instructions, quizzes, and any supplementary material will be posted in Course Link (courselink.uoguelph.ca/d2l).

Campus Resources

If you are concerned about any aspect of your academic program: Make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

Library Course Reserve (Ares)

For this course, you will be required to access course reserve materials through the University of Guelph McLaughlin Library. To access these items, select **Ares** on the navbar in CourseLink. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit How to Get Course Reserve Materials (<https://www.lib.uoguelph.ca/find/course-reserves-ares/>).

If at any point during the course you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621 | Email: libres2@uoguelph.ca | Location: McLaughlin Library, First Floor, University of Guelph

Course Learning Outcomes

1. Appreciate the contributions of science and technology to world history;
2. Recognize that specific sciences and technologies are dependent on their social, cultural, and historical context and cannot be understood outside of them;
3. Recognize the ways in which knowledge and skills have travelled and been constructed across cultures;
4. Engage with the central issues, research approaches, and practices of history as a discipline
5. Develop skills in critical reading, writing, and thinking;
6. Develop skills in library research and critical evaluation of information.

B.Eng. Graduate Attribute Learning Outcomes

If you are taking this course as part of your requirements for the B.Eng. program, the outcomes above support and are consistent with the following Graduate Attributes (GA) as outlined by the Canadian Engineering Accreditation Board (CEAB):

Graduate Attributes (GA):

GA 7: Communication Skills: An ability to communicate complex engineering concepts within the profession and with society at large. Such ability includes reading, writing, speaking and listening, and the ability to comprehend and write effective reports and design documentation, and to give and effectively respond to clear instructions.

GA 9: Impact of Engineering on Society and the Environment: An ability to analyze social and environmental aspects of engineering activities. Such ability includes an understanding of the interactions that engineering has with the economic, social, health, safety, legal, and cultural aspects of society, the uncertainties in the prediction of such interactions, and the concepts of sustainable design and development of environmental stewardship.

Lecture and Reading Schedule

| Day | Date | Topic | Activities | Due |
|-----|-------|---|---|---|
| Thu | 9/5 | Introduction to the Course | Read: Course Outline and Courselink | |
| Tue | 9/10 | The Importance of History | Read: McClellan and Dorn (M&D) Introduction | |
| Thu | 9/12 | Early Civilizations and Ancient Greece | Read: M&D Chapter 4 | Online Quiz 1 |
| Tue | 9/17 | Ancient Greece and Rome | Read: M&D Chapter 5 | |
| Thu | 9/19 | The Islamic Renaissance | Read: M&D Chapter 6 | Online Quiz 2 |
| Tue | 9/24 | Learning Support: Library Research (Dave Hudson, Librarian) | Readings TBA | Have your essay topic chosen by today! |
| Thu | 9/26 | Science, Politics, and Culture in Song Dynasty China | Read: M&D Chapter 7 | Online Quiz 3 |
| Tue | 10/1 | Learning Support: Library Research (Dave Hudson, Librarian) | | |
| Thu | 10/3 | Beyond China: Europe in the Middle Ages | Read: M&D Chapter 10 | Online Quiz 4 |
| Tue | 10/8 | The European Renaissance | Read: M&D Chapters 11 & 12 | |
| Thu | 10/10 | A Revolution in Science? | Read: M&D Chapter 13 | Research Proposal and Annotated Bibliography Due Today by 11:59pm |
| Tue | 10/15 | Fall Study Break | | |
| Thu | 10/17 | Science and Empire I: Commerce, Race, and Gender | | |
| Tue | 10/22 | Learning Resources: Writing (Sarah Rewega) | | |
| Thu | 10/24 | Science and Empire II: Collecting and Natural History | Read: M&D Chapter 16 | Online Quiz 5 |
| Tue | 10/29 | Industrialization and the State | Read: M&D Chapter 14 | |
| Thu | 10/31 | Urban Life I: Technology and Culture | Read: M&D Chapter 15 | |
| Tue | 11/5 | Urban Life II: Germs and Sanitation | | Online Quiz 6 |
| Thu | 11/7 | Social Darwinism and Eugenics | | |
| Tue | 11/12 | Relativity and the Modern World | M&D Chapter 18, pp. 401-413 | Online Quiz 7 |
| Thu | 11/14 | Secrets of Death: The Manhattan Project | M&D Chapter 19, pp. 427-432 | |
| Tue | 11/19 | Secrets of Life: The DNA Story | M&D Chapter 18, pp. 413-426 | Online Quiz 8 |
| Thu | 11/21 | Cold War Science and Technology | M&D Chapter 20 | Essay Due Today by 11:59pm |
| Tue | 11/26 | History of the Environmental Movement | | Online Quiz 9 |
| Thu | 11/28 | Conclusion | | Course Reflection Due by 11:59pm today |

Assessment Breakdown

| Description | Weighting (%) | Due Date |
|---|---------------|---|
| Essay Proposal and Annotated Bibliography | 15% | October 10 by 11:59pm |
| Research Essay | 30% | November 21 by 11:59pm |
| Online Quizzes | 20% | Sept. 12, Sept. 19, Sept. 26, Oct. 3, Oct 24, Nov. 5, Nov. 12, Nov. 19, Nov. 26 |
| End of Course Reflection | 5% | November 28 by 11:59pm |
| Final Exam | 30% | December 13, 8:30am to 10:30am (in person, location TBA) |

Assessment Details

Essay Proposal

Essay Proposal and Annotated Bibliography

15%

Details of this assignment will be available on Courselink and discussed in class.

Course Learning Outcomes Assessed: 2, 4, 5, 6

Quizzes

Online Quizzes

20%

Quizzes will be done online through the Quiz tab on Courselink. You will be given 9 multiple choice quizzes of ten questions each, and will have a limit of 30 minutes to complete the quiz. Each quiz will go "live" at 5pm on the Thursday and you will have 24 hours to complete the quiz. Quizzes will test your knowledge and understanding of that week's lectures and readings. I will take your best 7 quiz marks to calculate your final grade. Because of this built-in flexibility (you have two "throwaway" quizzes), I will grant academic consideration for missing a quiz **if and only if for that 24-hour period it was physically impossible for you to write that quiz**. No exceptions.

Course Learning Outcomes Assessed: 1, 2, 3

Essay

Research Essay

30%

Details of this assignment will be available on Courselink and discussed in class.

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5, 6

Exam

Final Exam

30%

The final exam will be written in-person during the official final exam period. It will consist of essay questions that will assess your knowledge and understanding of course material (lectures, readings, films) for the entire semester. More details will be discussed in class.

Course Learning Outcomes Assessed: 1, 2, 3, 4, 5

Reflective Activities

End of Course Reflection

5%

This end of course reflection will provide you an opportunity to reflect on your learning throughout the course. Your reflection must be at least 500 words in length but no longer than 750 words. Please use double-spacing, 12pt font. A successful reflection will make reference to specific material and moments in the course—lectures, discussions, films, readings. More details to come.

Course Learning Outcomes Assessed: 1, 2, 3, 5

Final Exam

Date: Dec 13

Time: Fri 8:30am-10:30am

Location: TBA *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

Last Day to Drop Course

The final day to drop Fall 2024 courses without academic penalty is the last day of classes: November 29

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

Course Grading Policies

Submission of Assignments

Unless otherwise indicated, all written assignments are to be completed as a Microsoft Word document (.doc or .docx) and submitted in the appropriate folder in the Dropbox on Courselink. Do not submit assignments using Google Docs or Pages. If you do so, you will receive late penalties until an acceptable format is used. Do not submit hard copies.

Generative AI Writing Assistants and Chat GPT

There are a number of AI writing assistants that are available as tools for you to use, such as the Large Language Model ChatGPT. More of these tools may even emerge this semester—they are certainly here to stay. Since writing skills, analytical skills, research skills, and critical thinking skills are part of the learning outcomes of this course, all writing assignments should be prepared by the student. The existing AI writing assistants are trained to produce written responses that mimic the grammar, content, style, and organization of writing on similar subjects included in their training data. **That is all they do.** Our course objectives (listed above) show what you will learn in this class, and consequently they are the criteria on which you will be graded.

Developing strong competencies in this area will prepare you for a competitive workplace. While AI is readily available and can be useful in some circumstances, it is essential that you learn basic skills to help you identify what good writing looks like before you'll be able to accurately and ethically employ their use. **To better help you meet the learning goals of this course, AI-generated submissions are not permitted at all in this course and any use of AI tools at any point in your writing process will be treated as plagiarism.**

I strongly encourage you to save research notes, email correspondence with GTAs and writing specialists, and drafts of all written assignments, since you may be required to produce such evidence that you conducted your own research and writing for your assignments. If the unauthorized use of AI is suspected, you may be asked to meet with me to discuss your paper, your process, and to confirm that the assignment is based on your own work.

Turnitin

I will be using Turnitin, integrated with the Courselink Dropbox tool, to detect possible plagiarism, unauthorized collaboration or copying as part of the ongoing efforts to maintain academic integrity at the University of Guelph. All submitted assignments will be included as source documents in the Turnitin.com reference database solely for the purpose of detecting plagiarism of such papers. Use of the Turnitin.com service is subject to the Usage Policy posted on the Turnitin.com site. A major benefit of using Turnitin is that students will be able to educate and empower themselves in preventing academic misconduct. In this course, you may screen your own assignments through Turnitin as many times as you wish before the due date. You will be able to see and print reports that show you exactly where you have properly and improperly referenced the outside sources and materials in your assignment.

Late Assignment

Late assignments will be penalized 2% per day, including weekends.

Courselink Discussion Board and Email Policy

I have created a General Discussion Board on Courselink. It is a great tool for you to support each other. Any question, unless it is of a private nature, should be asked on this space to allow for others to learn. Students are encouraged to respond to questions from others if they know the answer. The teaching assistants and I will also frequently check the discussion board to answer questions.

For more private matters, please email me directly at taabraham@uoguelph.ca or your assigned teaching assistant. When doing so, please use "HIST*1250" in the subject line. Please allow up to 48 hours for a response (not including weekends).

Class Etiquette

This is a large class and I want this to be a valuable experience for all of us. Below are some principles that can guide us:

1. Every student in this course has a right to learn as well as the responsibility not to deprive their peers of their right to learn. So it is important to:
 - Attend classes and arrive on time. Late arrivals and early departures are disruptive.
 - Respect the time and opinions of your peers
2. Assigned readings are to be completed before coming to class. Some weeks have heavier amounts of reading, others do not have any reading. Readings are meant to complement what we discuss in lecture.
3. Although this is a large class, we will have class discussions whenever possible, and I encourage you to participate.
4. As we are at the dinner hour, I don't mind if you need to eat during class, but try to be discreet, please keep it clean, and take all waste with you and dispose of it properly.

Standard Statements for Undergraduate Courses

Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to make a booking at least 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all undergraduate students except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available

in the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigators/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

Illness

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

Recording of Materials

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

Resources

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

When You Cannot Meet a Course Requirement

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)