

**HISTORY 1805e**  
**Science, Technology and Global History**  
**WESTERN UNIVERSITY**  
**Fall and Winter, 2013-2014**

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Instructor:  
Dr. Josh MacFadyen  
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Office: Lawson Hall 2270D  
Office Hours: Monday 1-3 pm.

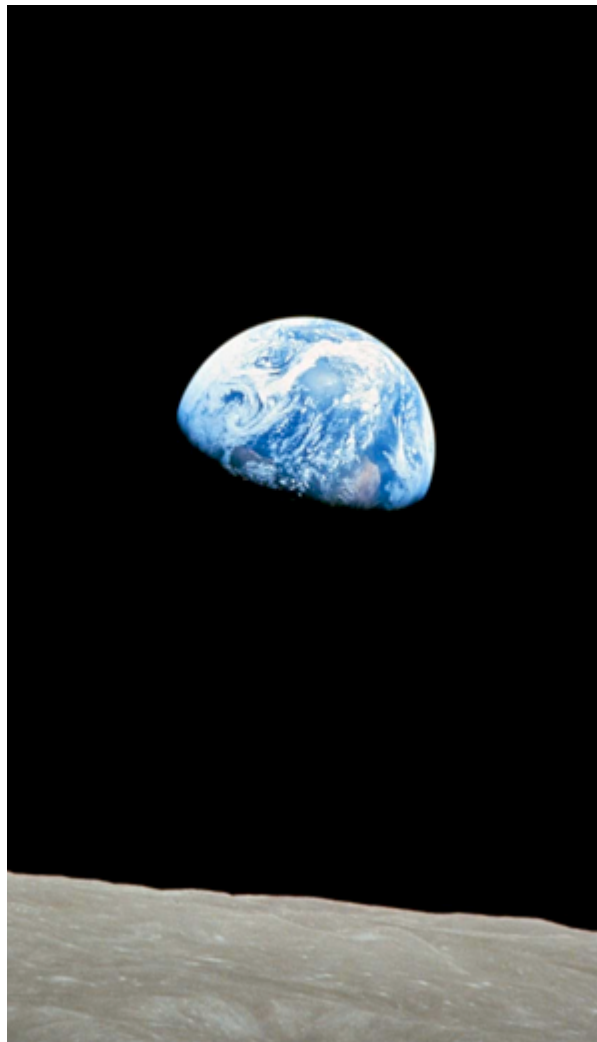
Department of History  
Western University  
TBA  
Time: Wednesday 6-9pm

*Draft Syllabus*

### Course Description

History 1805e is an exciting introductory-level course about the global history of science and technology, and about the role science and technology have always played in history. It is intended for students planning to major in science or engineering, and also for history concentrators and other students in the social sciences or humanities. **In other words, all are welcome.** The course includes no technical math or science and we do not assume that students will have any particular historical background or technical expertise.

This course introduces students to “big history,” which uses the tools of scientists, social scientists, and historians to unite traditional history with the deep past of our species and our planet. We begin with the Big Bang and go all the way to the future. We examine the past at different scales, from microscopic bacteria to human beings to thousand-year empires.



We ask how the history of science and the world look different when viewed from India or China or Africa, from Renaissance Europe or ancient Greece. We consider alternate histories—what if things had happened differently?—and alternatives to the modern university and its disciplines. We talk about ways to end all life on earth and consider how science and history might help save the planet. Above all, **we argue against the separation of history and science**, discovering how science and technology have always been shaped by human history and vice versa.

And we do all that in one lecture a week!

## Assignments

Students are expected to attend every lecture and to participate in class discussions and activities. Because there is no required textbook in this course, attendance and engagement are critical.

Students will write a number of short “history labs” (two per term, each worth 10%) on a variety of questions and topics. There will be a December exam and an April exam, each worth 30%. Both exams will include a mix of identifications and short essay questions based on the lectures and course readings. The December exam will cover the first half of the course; the April exam will cover both halves of the course but be heavily weighted to the second term.

## Learning Outcomes

Students who pass this course will be able to:

- See “natural history and human history [as united] in a single, grand, and intelligible narrative.” (Christian, *Maps of Time*)
- Describe the basic history of the Universe as it is understood in the historical sciences, from the Big Bang to the present. This narrative covers the inanimate universe, the origin of stars and galaxies, the formation of our solar system, the evolution of life, the emergence of humankind, and foraging, agrarian and modern human lifeways.
- Integrate and critically evaluate sources of information from different disciplines, presented in different media, and conduct short research projects that enable them to answer questions of interpretation.
- Focus on “interconnections between people and communities in all eras of human history,” and identify crucial turning points “in the ways we humans produced and distributed food; organized ourselves in communities; defined and explored and populated our environment; experienced, responded to, and often created ‘worldwide’ crises; and increased or decreased in numbers.” (Bain and McArthur Harris, Preface to *This Fleeting World*)

## Evaluation

First Term: 50%  
History Lab #1: 10%  
History Lab #2: 10%  
December Exam: 30%

Second Term: 50%  
History Lab #3: 10%  
History Lab #4: 10%  
April Exam: 30%



## Readings

There is no required textbook for this course. Students who wish to supplement the lectures with a textbook are encouraged to read along in the following text, available at the campus bookstore and on reserve at Weldon. This is optional and not required.

- James McClellan and Harold Dorn, *Science and Technology in World History* (Second Edition) (Baltimore: Johns Hopkins University Press, 2006).

There will be required readings for some weeks and some of the written assignments; these will all be distributed online or in class.

## Course website

History 1805 is supported by an OWL website. Please make sure you have signed-in there, as a variety of course materials and notices will be posted on the site. If you are having difficulty getting logged in you should contact me by email as soon as possible.

## Course Outline

Big History	11 Sept
Life emerges	18 Sept
Evolution	25 Sept
Becoming human	2 Oct
Civilizations and agri-cultures	9 Oct
The Exact Sciences in Antiquity	16 Oct (History Lab # 1 due)

Old World Encounters	23 Oct
The Measure of Reality	30 Oct
Scientific Revolution	6 Nov
The Columbian Exchange	13 Nov
Unending Frontier	20 Nov
The Discovery of Deep Time	27 Nov (History Lab # 2 due)
Review class	4 Dec
<b>Exam</b>	<b>TBA</b>
The Great Divergence	8 Jan
Electricity and Enlightenment	15 Jan
Cities and Germs	22 Jan
Are Whales Fish?	29 Jan
Disease, medical artifacts	5 Feb (History Lab # 3 due)
Inventing the University	12 Feb
<b>Reading week</b>	<b>17-21 Feb</b>
Einstein's Clocks	26 Feb
World of War	5 Mar
The Universal Machine	12 Mar
The Green Revolutions	19 Mar
The Killer App	26 Mar
Becoming inhuman	2 Apr (History Lab # 4 due)
Review; How to Use this Course	9 Apr
<b>Exam</b>	<b>TBA</b>

### **The Classroom Environment:**

- Students are expected to treat each other respectfully and that should be reflected in both conduct and language.
- In this spirit, students will turn off cell phones and other audible devices when entering the classroom.
- Students will also turn off all texting devices during the class.
- Students are encouraged to use laptops to take notes and for course-related activities, but please no social media.

## Special Needs:

- Students who have special needs that will influence in any way their ability to complete the required components of this course must notify the instructor and the Office of the Registrar in a timely manner.

## Evaluation and the Standard of Work:

- Student's work will be evaluated on the basis of its content, organization and execution, and quality of writing.
- Papers which suffer from a very poor writing style may be returned to the student ungraded.
- Plagiarism: Students must write their essays and assignments in their own words. Whenever students take an idea, or a passage from another author, they must acknowledge their debt both by using quotation marks where appropriate and by proper referencing such as footnotes or citations. Plagiarism is a major academic offence (see Scholastic Offence Policy in the Western Academic Calendar).
- *Turnitin: All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com>).*

## Submission of Work:

- Extensions for the tutorial assignments may be given in some circumstances. Students seeking an extension must discuss their request with the tutorial instructor well in advance of the due-date. Assignments which do not meet the revised deadline, or which are submitted late without a formal extension, will have marks deducted at the rate of 5% per day.
- Assignments must be submitted by 6pm on the day they are due; otherwise, they will be considered late. Weekends count in the calculation of late days. Please do not submit assignments to the History office.
- Students must keep a disk copy or photocopy of their assignments. In the event the instructor does not have and/or never received an assignment you believe you have submitted, it is up to you to produce a copy of the original within 24 hours.