Science & Society: A Global History

01:506: 251
Instructor
Class Time and Location
Office Hours
Second Summer Session, June 25 - August 3, 2018
Christopher Blakley
10:30 am-12:20pm, Monday to Thursday, Scott Hall, Room 205
2:00-3:30pm, Monday and Wednesday, Van Dyck Hall, Room 013

Course Description: Is “Science” a uniquely Western intellectual tradition? Could the Scientific Revolution have only originated in Europe? What could we discover if we explored the history of science from a global perspective?
This course invites students to consider a global approach to the development of science, medicine and technology. We will take a world tour of the early modern period, which has long been seen as the era when the globe assumed its current form and became “modern”.

One prevailing story about the rise of modernity focuses on science, medicine and technology. In this story, people ask how Western Europeans developed experimental techniques of unprecedented power for knowing and exploiting the natural world.

A second origins story identifies modernity with the collision of cultures produced by European imperialism, war, trade, and slavery, bringing Americans, Africans, Asians and Europeans into contact as never before.

What would happen if we considered that these two processes are connected? How were science, medicine and technology transformed by globalization and the movement of peoples – and how were cultures transformed by science?

We will examine how knowledge traveled through global networks stretching from Asia to the Middle East, Europe and America, exploring how science created new attitudes to nature (and the roots of our current ecological crisis) and the globalized world still with us today.

**Learning Goals:** Upon completion of this course, students will be able to:

1. Critically read and write about science, technology, and medicine as part of historical cultures that change according to time and place.
2. Analyze and evaluate established narratives of progress and modernity through science and technology as historically contingent narratives.
3. Understand and analyze the relationship between science, technology, medicine, global history, and the history of empires, colonization, and slavery in the pre-industrial world.
4. Examine how ideas about science and technology have been linked to claims about cultural superiority and inferiority; and interrogate histories of “Western science” as opposed to global science.
5. Critically analyze texts, images, and artifacts as primary sources.
6. Evaluate secondary sources for the coherence and persuasiveness of their analytical arguments and theoretical frameworks.
7. Write argumentative essays that persuasively present an analytical and historical argument using primary and secondary source materials.

**Required Texts:** There is no required textbook, however all of the assigned readings for the course (including book chapters and articles) will be posted to the course Sakai site. Once you are registered for the course you will be added to the Sakai site. Readings must be completed before class meetings.
Technology in the classroom: Students who wish to use computers in the classroom for note-taking or discussing the assigned readings are welcome. However, students using computers for other purposes beyond what our class is engaged in will lose the privilege to use technology in the classroom.

Plagiarism: Any evidence of plagiarism will be promptly reported and directed to the Dean of Students Office. Students are expected to abide by the Student Code of Conduct and Academic Integrity Policy.

Assignments: Students will be assessed by two examinations (midterm and final), and three short essays.

Examinations will consist of five identification questions and one essay question based on the lectures and assigned readings.

The short essays (2 pages) will invite students to answer a question based on the lectures, assigned readings, and in-class discussions. The prompt and guidelines for each essay assignment will be distributed via Sakai one week before the due date.

The exams and essays will be assessed based on the student’s ability to synthesize information, develop a historical and analytical argument using evidence, and present that argument through clear prose free from spelling and grammatical errors.

Finally, students will be assessed on their citizenship in the classroom. Students are expected to arrive on time, contribute to class discussions, and respect the views and ideas of their colleagues in our learning community. In addition, students are welcome to participate in the class by emailing the professor three questions or comments on the assigned readings before class.

Students with Disabilities: I encourage students who feel they need accommodations based on the impact of a disability to contact me to discuss possibly adapting course materials and assessments to suit their needs. In addition, please register with the Office of Disability Services (ODS) at 848-445-6800 (or by email at dsoffice@echo.rutgers.edu) located in Lucy Stone Hall, Suite A145 on the Livingston Campus. Documentation is required in advance from ODS before accommodations can be made for exams. Visit the internet address of this office at https://ods.rutgers.edu/ for more information.

Office Hours: My office hours will be on Mondays and Wednesdays in Van Dyck Hall, Room 013. If students are unable to meet during these hours I am happy to accommodate meeting at
another time. I encourage students to meet with me individually to discuss the course materials, lectures, assigned readings, and assignments (including the short essays and exams). I am happy to be a resource for students on campus, and throughout the semester I am available to answer questions, read and comment on drafts of essays, and offer advice on studying for the exams.

**Contacting the Professor:** Please email me with any questions about the course at cmb419@history.rutgers.edu.

**Grading**
- Citizenship 10%
- Paper 1 20%
- Paper 2 20%
- Paper 3 20%
- Midterm 15%
- Final 15%

**Schedule**

**Week 1**
Monday - June 25 - Introduction: The Scientific Revolution and the History of Science

Tuesday - June 26 - Networks: Labor, Translation, and Instruments

Wednesday - June 27 - Part 1: Science in the Islamic Caliphates

Thursday - June 28 - Part 1: Science and Islam: Beyond the “Golden Age” Narrative

**Week 2**
Monday - July 2 - Part 1: Ottoman Geography

Tuesday - July 3 - Part 1: **Discussion:** Al-Nuwayri and Mamluk Encyclopedism
- Reading: Selections from *The Ultimate Ambition in the Arts of Erudition* by Shihab al-Din al-Nuwayri.
Wednesday - July 4 - **No class meeting, July 4th Holiday**

Thursday - July 5 - Part 2: America: Mesoamerican Knowledge (Due: Paper 1: Al-Nuwayri)

**Week 3**

Monday - July 9 - Part 2: America: Columbian Exchanges and Natural History

Tuesday - July 10 - Part 2: America: Creole American Sciences

Wednesday - July 11 - Part 2: **Discussion:** Francisco Hernández and Chocolate

Thursday - July 12 - Part 3: The Qing Empire and Jesuit Missionaries (Due: Paper 2: Hernández)

**Week 4**

Monday - July 16 - Part 3: Japan and the Dutch East India Company

Tuesday - July 17 - **Midterm Exam In-Class [Covers Parts 1, 2, and 3]**

Wednesday - July 18 - Part 4: Europe’s New Science Revisited

Thursday - July 19 - Part 4: Networks: Global Newton

**Week 5**


Tuesday - July 24 - Part 4: Science and Slavery: From Plantations to Colonial Botany

Wednesday - July 25 - Part 4: **Discussion**: Domingos Álvares and Slavery

Thursday - July 26 - Part 5: India: The Mughal Empire (**Due**: Paper 3: Álvares)

**Week 6**

Monday - July 30 - Part 5: India: Orientalism and The Asiatic Society

Tuesday - July 31 - Part 5: India: Newton in Translation

Wednesday - August 1 - The Globe in 1800: A Mechanical or Organic World?

Thursday - August 2 - Final Discussion and Course Review
  [http://www.nybooks.com/articles/2015/12/17/eye-present-whig-history-science/]

Friday - August 3: **Final Exam In-Class [Covers Parts 4 and 5]**