



14SP_GSTS_250_A China, Science and Mathe...

My home ► My courses ► GSTS ► 14SP_GSTS_250_A ► Schedule ► Course Schedule

Course Schedule

TOPICS & READING ASSIGNMENTS

(Readings from other than the required texts are linked from this page)

WEEK 1

February 3: Introduction

The Nova film *The Genius that was China: The Rise of the Dragon*

Special assignment due at the beginning of class on February 7: State in your own words, in one double-spaced paragraph: What are the objectives of this course?

February 5: Ancient Greek and Chinese background

PBS Film:



Ancient Greece map

Ancient Greek personages and chronology

Greek-Chinese chronology

Readings

Selections from *The World of the Ancient Greeks* by John Camp and Elizabeth Fisher

Geoffrey Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece*. Chapter 1 (Aims and methods)

February 7: Definitions of science and the history of science

Jürgen Renn and Donald Salisbury, "Toward a Dynamics of Science Practice", draft chapter from English revision of *On the Shoulders of Giants and Dwarfs: Einstein's Unfinished Revolution*.

February 10: Last day to add a course

WEEK 2

February 10: Joseph Needham I

China map

China practice quiz

Readings

Simon Winchester, *The Man Who Loved China: The Fantastic Story of the Eccentric Scientist Who Unlocked the Mysteries of the Middle Kingdom*. Chapters 1-3, pp 1-132

Discussion questions will be posted on moodle over the previous weekend. Please come prepared to answer them.

February 12: Joseph Needham II

Readings

Simon Winchester, *The Man Who Loved China*, Chapters 4-7, pp 133-265

February 14: The Needham legacy

Readings

Timothy Brook, "The Sinology of Joseph Needham." *Modern China*, Vol. 22, No. 3 (Jul., 1996): 340-348.

Roger Hart, "Beyond Science and Civilization: A Post-Needham Critique." *EASTM* 16 (1999): 88-114.

WEEK 3

February 17: Oracle bones, Writing and the Shang Dynasty

QUIZ 1: China Map

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapter 1, pp 6-37

February 19: Chinese Philosophical Foundations

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapter 2, pp 38-59

February 21: Introduction to naked-eye astronomy

Readings

Thomas Kuhn, *The Copernican revolution*, chapter 1 (The ancient two-sphere universe), pp. 1-25

WEEK 4

February 24: Ancient Greek mathematics and astronomy

Readings

Thomas Kuhn, *The Copernican revolution*, chapter 1 (The ancient two-sphere universe), pp. 25-76

Geoffrey Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece*. chapters 3 (Social and institutional framework of Greek science)

February 26: Ptolemy and Hellenic science

Readings

Geoffrey Lloyd and Nathan Sivin, *The Way and the Word*, chapter 4 (Fundamental issues of Greek science)

February 28: Ptolemy and Hellenic science - continued

QUIZ 2: Naked-eye astronomy

WEEK 5

March 3

Class canceled due to weather

March 5

Discussion of chapter 4 of Lloyd and Siven (Fundamental issues of Greek science)

Chinese Han dynasty

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapter 3, pp 60-85

March 7

Social and religious framework of early Chinese science

Readings

Stephen Teiser, "The Spirits of Chinese Religion." In *Religions of China in Practice*. Edited by Donald S. Lopez, Jr. Princeton University Press, 1996.

Geoffrey Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece*. Chapter 2 (Social framework of Chinese science)

Week 6

March 17: Religion and the Development of Science & Technology in China II

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 4

March 19: Ancient Chinese Astronomy

March 21: Issues of ancient Chinese science

Readings

Geoffrey Lloyd and Nathan Sivin, *The Way and the Word: Science and Medicine in Early China and Greece*. Chapter 5 (The fundamental issues of Chinese science)

Week 7

March 24: Tang dynasty

QUIZ 3: Ancient Chinese chronology and personages

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 5

March 26: Song dynasty

Spring Festival Along the River by Zhang Zeduan

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 6

March 28: Mathematics and astronomy during the Song and Tang dynasties I

Readings

Colin A. Ronan, *The Shorter Science and Civilisation in China*, Vol. 2, chapter 1 (Mathematics)

Week 8

March 31: Mathematics and astronomy during the Song and Tang dynasties II

Readings

John B. Henderson, "Chinese Cosmographical Thought: The High Intellectual Tradition." In *The History of Cartography*, vol. 20: *Cartography in Traditional East and Southeast Asian Societies*, eds. J. B. Harley and David Woodward. Chicago: University of Chicago Press, 1994

April 2: Yuan dynasty

QUIZ 4: Chinese astronomy and mathematics

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 7

April 4: Calendar reform in the Yuan dynasty

Week 9

April 7: The Copernican revolution in the West

Readings

Thomas Kuhn, Chapter 4: "Recasting the tradition: Aristotle to the Copernicans" in *The Copernican revolution*

April 9: Alchemy in the West

Readings

Ku-ming Chang, "Alchemy as studies of life and matter", *Isis*, 2011

April 11: No class meeting

Week 10

April 14: The Galilean revolution

Readings

Noel Swerdlow, "Galileo's discoveries with the telescope and their evidence for the Copernican theory"

April 16: Chinese alchemy, time, and metallurgy

Nathan Sivin, "Chinese Alchemy and the Manipulation of Time." *Isis*, Vol. 67, No. 4 (Dec., 1976): 512-526

April 18: Ming dynasty

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 8

Week 11

April 21: Qing dynasty I

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapter 9, pp. 220 - 236

April 23: Early modern transmission of scientific knowledge from Europe

Readings

Matthias Schemmel, "The Transmission of Scientific Knowledge from Europe to China in the Early Modern Period." In *The Globalization of Knowledge in History*. Jürgen Renn, ed. et al. Edition Open Access, 2012: chapter 11

April 25: Jesuits in China

Readings

Nathan Sivin, "Copernicus in China or, Good Intentions Gone Astray." *Science in Ancient China. Researches and Reflections*, Chapter IV. Aldershot: Variorum, 1995 (selections)

Week 12

April 28: Qing dynasty II

QUIZ 6: The Copernican system and Galileo

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapter 9, pp. 236-261

April 30: Jesuit and Chinese medical encounters

Readings

Marta Hanson, "Medicine and Culture: Chinese-Western Medical Exchange (1644-ca.1950). Jesuits and Medicine in the Kangxi Court (1662-1722)." *Pacific Rim Report* No. 3 (2007)

May 2: Twentieth century China

Readings

Patricia Ebrey, *The Cambridge Illustrated History of China*, chapters 10 and 11, pp. 262-331

Week 13

May 5: Medicine in the People's Republic

Readings

Kim Taylor, "A new, scientific, and unified medicine: civil war in China and the new acupuncture, 1945-49," In *Innovation in Chinese Medicine*, Cambridge University Press, 2001: 343-369

Elisabeth Hsu, "The History of Chinese Medicine in the People's Republic of China and its Globalization", *East Asian Science*

May 7: Mao's war against nature

Readings


Judith Shapiro, "Population, Dams and Political Repression: A Story of Two Environmental Disasters and the Scientists who Tried to Avert Them." In *Mao's War Against Nature: Politics and the Environment in Revolutionary China*. Cambridge University Press, 2001: 21-65

May 9: Review

Week 14

May 14: Final Exam, 1:30 - 3:30

Last modified: Saturday, 26 April 2014, 6:56 AM

 Moodle Docs for this page

You are logged in as Donald Salisbury (Log out)

[14SP_GSTS_250_A](#)