



13FA_CI_101_N Freshman Seminar

My home ► My courses ► CI ► 13FA_CI_101_N ► Syllabus ► Syllabus

Syllabus

Communication/Inquiry 101N Fall 2013

Yin Yang, Stars, and All Under Heaven: An Exploration of Chinese Science and Society

Syllabus

Professor

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Student Leaders

- Evan Baker from Coppell, TX - Biology major
- Alison Gu from Chengdu, China - Business major and pre-engineering
- Evann Wu from Flower Mound, TX - Biology and Chinese double major

Office Hours

My regular office hours are Monday 11 - 11:50 AM, Wednesday 4:30 - 5:30 AM, , and Friday 12:30 - 1:20 PM. They are posted on my office door with my class schedule.

Texts

- *The Cambridge History of China* (Second Edition) by Patricia Ebrey
- *The Man Who Loved China* by Simon Winchester

Course Description

This is the course description which you received in May:

In the 17th century the English philosopher Francis Bacon identified gunpowder, the compass, and the printing press as those human inventions that had exercised the greatest influence on human affairs. He was not aware that all three had originated in China. It was not until the mid-twentieth century that the British scientist Joseph Needham began to bring to the attention of the Western world the full extent of Chinese achievements in science and technology. Yet even he is now challenged for his conviction that scientific progress in the West began in the 17th century to surpass China, leading him to inquire why the scientific revolution did not occur in China.

Historians of science no longer speak of a linear progress toward an ultimate objective truth. This is not to deny that successful comprehensive systems of knowledge exist. Rather, the objectives, methods, and uses of such systems are closely interlinked both with the society in which they develop and with that society's interactions with other cultures. The study of the global dynamic of this development of scientific and technical knowledge has become a major focus of the history of science.

In this course we will compare and contrast the development of science in China with parallel developments in ancient Greece, the Islamic world of the first millennium AD, and the European Renaissance. Since we already have some familiarity with the Western tradition, the emphasis will be on the Chinese context, in particular the material, political, philosophical, religious, and artisanal background. In exploring Chinese achievements in mathematics, astronomy, chemistry, and medicine we will find an early and persistent link with Daoist and Confucian notions of yin and yang. Parallel to the early Western Christian tradition of an earth-centered cosmos overseen by the church we find in China a living cosmos in which the state and individuals are advised to act in a manner that will insure the harmonious existence of all under heaven. Both of these traditions have left their traces in modern science

General C/I Objectives

C/I 11 Freshman Seminar is the initial core course in the Austin College curriculum. It is intended to serve as a bridge from various high school backgrounds to rigorous college-level learning. We are mandated to incorporate instruction in written and oral communication skills, and library use, as well as activities which hone intellectual inquiry and critical thinking skills. Specifically, we intend to develop the following:

- Skills of investigation and critical analysis--especially the ability to evaluate sources, interpret evidence and draw logical conclusions.
- Skills of written communication—especially the ability to write clearly and to present thoughts in a coherent and persuasive fashion.
- Skills of oral communication—especially the ability to listen critically, ask clear questions and present thoughts effectively in discussion with others.
- Skills pertaining to effective and efficient use of the library—especially the ability to locate and exploit traditional and electronic resources.
- A sophisticated and thoughtful understanding of the principles of academic integrity—especially the policies and procedures in effect at Austin College.

Course Objectives

We firmly believe that we can meet all of these objectives most effectively if we can manage to engage you intellectually in this exploration of the nature and the cultural roots of remarkable Chinese advances in science. Thus we insist that this will be a "serious" course, and we anticipate that you will sample some of the joys of intellectual discovery. (In layperson terms ... you're going to have some fun!)

The central themes that we will address in this course are the following:

- Aspects of Chinese political history through the Song dynasty
- Chinese synthesis of Confucianism, Daoism, and Buddhism and the relation to Chinese science and technology
- Similarities and differences in ancient Greek and Chinese social and political structures and their relevance to scientific discoveries
- Rudiments of naked-eye astronomy the link to ancient Greek and Chinese society
- Greek geometry, Chinese algebra and their relation to astronomy
- The 17th century European scientific revolution and its impact in China
- Scientific paradigm shifts and Copernican processes as exemplified in Europe and China

Co-curricular Objectives

We want to assist you as you take more responsibility for your education. This will be a challenging, at times frustrating, but ultimately rewarding transition period for you. As we share both the joys and trials of college life, we hope you will look not only to your faculty mentor and your student leaders, but also to your classmates, for support and affirmation.

Reading and Writing Assignments

The reading schedule will be posted on moodle. Please note that readings are to be completed *before* the associated class meeting. In most instances this means you will read about a topic before it is discussed in class and you are expected to come to class prepared to participate in small group discussions.

An initial writing assignment will also be listed on the schedule. You are asked to typeset a two paragraph statement addressing your hopes and expectations for this course. This statement is to be submitted by email before the beginning of class on Monday, September 9.

Research and Oral Reports

You are asked to work with two other classmates on a short mid-semester research project. Your own two-page written report is due at the beginning of class on Monday, October 7. The topic selection and group members are to be decided in consultation with the course leaders by the beginning of class on Wednesday, September 25. Joint group oral reports are scheduled for Monday and Wednesday, October 7 and 9.

In addition you are asked to research, write, and report on a major research project. The topic must be selected in consultation with the course leaders by Monday, October 14. An annotated research bibliography is due by the beginning of class on Monday, October 28. A first written draft is due by the beginning of class on Monday, November 11. The final version is due on Friday, November 29. Individual oral reports on the projects are scheduled for Monday, December 2, Wednesday, December 4, and Friday, December 6. Each of you will be asked to critique the research paper of one of your classmates. These critiques will be due at 5 pm on Friday, December 6.

Moodle

This syllabus, the course schedule, and additional course resources will be posted on the Austin College Moodle web site. You will be given instructions on how to access the site in the first class meeting.

Quizzes

There will be several short announced quizzes.

Grading

Grades will be computed as follows:

Classroom participation	30
Small project paper	8
Class joint presentation	7
Major research paper	20
Major research presentation	10
Peer critique of major research paper	5
Quizzes	20
Total	100


Academic Integrity

You are expected to abide by the college academic integrity policy which is outlined in the *Environment*, the student handbook. The following activities constitute a not necessarily exhaustive list of offenses which are in violation of the college's Academic Integrity Policy:

- Turning in work done by someone else.
- Working on an assignment with others when the instructor asked for individual work.
- Receiving unpermitted help on an assignment.
- Writing or providing a paper for another student.
- Getting Q/A from someone who has taken test.
- In a course requiring computer work, copying a friend's program rather than doing your own.
- Helping someone else cheat on a test.
- Falsifying lab or research data.
- Fabricating or falsifying a bibliography.
- Copying from another student during a test or examination without his or her knowing it.
- Copying from another student during a test with his or her knowledge.
- Copying a few sentences of material from a written source without footnoting them in a paper.
- Turning in a paper either purchased or plagiarized, in large part, from a term paper "mill" or website.
- Copying a few sentences of material from an Internet source without footnoting them in a paper.
- Using unpermitted crib notes (cheat sheets) during a test.
- Copying material almost work for word from any written source and turning it in as your own work.
- Altering graded test and submitting it for additional credit.
- Turning in a paper copied from another student.
- Using a false excuse to obtain extension on due date.
- Hiding or damaging library/course material.
- Giving aid to anyone who has not yet taken the daily online reading quiz
- Receiving aid on an online reading quiz
- Cheating on a test in any other way
- Cheating on a written assignment in any other way.

These general policies apply unless explicit written instructions to the contrary are distributed by the instructor. You must become familiar with the requirements set out in this syllabus. If there is ever a question about the appropriateness of an action, ask the instructor for clarification.

Last modified: Friday, 18 October 2013, 8:15 AM

 Moodle Docs for this page

You are logged in as Donald Salisbury (Log out)

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