

## Big History at Dominican University of California

By Cynthia Stokes Brown

March 2011

A little more than a year ago (December '09), the faculty at Dominican voted to require all incoming freshmen to take a sequence of two courses in big history, to be implemented in the fall of 2010. We seem to be the first university in the world to implement this requirement. In this paper I want to describe how this decision has played out in its first year.

### Evolution of Big History at Dominican

The idea of big history began at Dominican when the chair of our religion and philosophy department, Phil Novak, discovered with the work of Thomas Berry. In 1983 Novak invited Berry to campus to speak with the faculty. Berry already then proposed organizing the curriculum around the universe story, but the idea eluded most of the faculty at that time.

Berry's idea found a soft spot in my mind and nestled there until 1991, when I read in *The Journal of World History* an article called "The Case for Big History" by an obscure professor teaching history at Macquarie University in Sydney, Australia. That professor was David Christian, who had begun in 1989 teaching a history course that started with the Big Bang, using guest speakers for the early parts less familiar to him. At once I agreed with Christian that this was the way to teach history and revitalize the curriculum.

By 1993 I managed to teach a world history course for prospective elementary teachers; without asking permission, I extended the timescale back to the beginning. Since I was directing the secondary teaching program, however, my chair insisted that I return full-time to the School of Education, where I supervised teachers in every discipline, experiencing how disconnected to anything were the lessons they were teaching.

When my chance for a sabbatical came around, I proposed to the approval committee that I would write a book that would cover the Big Bang to the present. When half the committee couldn't refrain from laughing, I revised my proposal quickly to something less preposterous, in order to salvage my sabbatical.

After I retired from full-time commitments in 2001, I got out my bulging file of possible chapter headings and began work in earnest—and in secret. I taught part-time, only the world history course, where I tried out my early chapters.

Four books made my writing possible. The first two were Ursula Goodenough's, *The Sacred Depths of Nature* (1998) and *The Structure of Big History* (1996) by Fred Spier at the University of Amsterdam. The other two were *The Human Web* (2003) by historians William and J.R. McNeill and *Something New Under the Sun* (2000) by J.R. McNeill. Just as I was writing my final chapter, I became aware of David Christian's *Maps of Time* (2004). My book, *Big History*, came out in 2007. Since then Fred Spier has written *Big History: The Future of Humanity* (2010). These have been key books in the evolution of big history for me.

### Faculty Approval

In the fall of 2009 several random events came together at Dominican. The faculty and the administration were not happy with their General Education (GE) program—too little coherence or quality control. A young professor in the English department, Mojgan Behmand, became chair of the committee charged with designing a new freshman experience requirement, part of the GE program. Phil Novak, still dreaming of the universe story, became acting dean of Arts, Humanities, and Social Science. Novak decided to use his new influence to take a bold step toward revising the curriculum; he put me on the committee to design a new freshman experience. Within a week he and I persuaded Behmand of the power of big history; then she, with our assistance, spent the rest of the semester persuading the rest of the faculty. Some opposition came from small departments like art history, which would lose courses. But by the final discussion more than twenty faculty members were eager themselves to teach big history.

The faculty approved two freshman courses. In the first semester freshmen would take a big history survey course, while in the second semester they would have a choice of various courses in which a discipline would be displayed “through the lens of big history.” These would not be the usual survey courses, but would be content selected to fit and review the turning points in big history. With this scheme, students and teachers would have a chance both to absorb the framework of the big picture and to look at parts of it in more depth through the lens of a selected discipline.

I cannot really explain the faculty’s enthusiasm for big history and its willingness to take on this challenge. I can only say that we are a small institution (2000+ students, 75 full-time faculty), and at a small college everyone is a generalist by necessity. We feel in close contact across disciplines, since most of our own departments don’t have enough members to provide much collegiality. Plus, many of us eat lunch together. In early 2010 Behmand was named Director of GE, giving her the full support of the administration.

### Our Summer Institute

To implement the approved courses, about thirteen faculty had to be ready to teach sections of big history (300 incoming freshmen, classes capped at 20-22), plus additional faculty for the disciplined-based courses. This could only be accomplished, we thought, by holding a seven-day summer institute for about thirty people to go over both the whole range of content and the teaching issues. The administration put up \$50,000; we invited three guest speakers; we asked our own colleagues to present material that they knew well. Participants came mostly from the arts and humanities, because those were the departments that had been teaching the freshman courses and needed the units. One participant came from business and three from the sciences. Everyone who attended all sessions received a stipend of \$1500, which certainly sweetened the deal.

We leaders strongly believed that big history would provide a common framework for students’ future courses. In addition, Behmand strongly believed that all freshmen needed to acquire the basic writing skills that would enable their success in successive courses and that these skills needed to be taught across the curriculum. Hence, we included sessions designed to help every big history faculty teach library and writing skills, as well as big history content.

The summer institute ended with both exhaustion and satisfaction. Faculty reported big gains both in knowledge of content and of pedagogical skills. Better yet, they felt part of a sharing community, more than they ever had before. They had begun to design six follow-up courses for the spring semester. Most important for the initial big history course, they had agreed how to both standardize and customize a syllabus for the course.

To facilitate discussions during the institute, we prepared a draft of a possible syllabus. After much discussion, participants agreed to use the proposed syllabus as their general outline, but they wanted to be free to make minor adjustments in topics, assignments, and in-class activities. The standard parts would include the general outline, the textbooks, the writing assignments, and parts of the quizzes and final exam. The director of GE would screen each instructor's syllabus to assure quality and coherence.

The most difficult issue to resolve at the institute concerned what book to use as a textbook. Since no standard textbook in big history existed at the time, the primary choices seemed to be David Christian's *Maps of Time* or my *Big History*. (The faculty had been asked to read both before the institute.) *Maps* seemed too advanced for the skill level of many of our freshmen, while my book seemed too thin, without even enough pages to read on some topics. Either too hard or too easy! The faculty compromised by agreeing to use both books as texts, with each instructor deciding which passages to assign for each topic, being certain to use enough of each so that students would feel they got their money's worth. Fortunately, together the books cost less than a standard textbook.

### The First Trial of Our Big History Survey

How could we shape our big history survey so that neither teachers nor students would be overwhelmed by the flood of information in one semester? We knew that we had to create "chapters," or chunks of related material, in some kind of meaningful sequence.

To shape our course, we accepted an idea that David Christian articulated in late 2007 as three of us (Christian, Craig Benjamin, and myself) undertook the writing of the first big history textbook. This idea we called "thresholds of increasing complexity." As we used the term, "thresholds" refers to the entrance, doorsill, or transition point at which the universe/world enters into a new stage of increased complexity.

"Complexity," of course, requires a more complex definition. Our understanding of it is based largely on the work of Eric Chaisson and of Fred Spier. In the manuscript of our textbook we define complex entities as having four aspects. They 1) have many diverse components, 2) have components that are arranged in particular ways, 3) have new or emergent properties not existing in the components themselves except when arranged in a particular way, and 4) seem to be associated with flows of energy that help maintain their structure: the more complicated the structure, the more energy it takes to hold it together.

So what are the thresholds, or turning points, in big history? For our textbook and for our course, we chose the following eight, aware that other choices could be made:

1. Origins of the Universe
2. Origins of Stars and Galaxies
3. Death of Stars

4. Formation of Solar System and Earth
5. Evolution of Life
6. Appearance of Human Beings
7. Transition to Agriculture  
Sub-threshold: First Cities and States
8. Industrial Revolution and Fossil Fuels

We distributed these thresholds over the semester's duration, finding a balance between the science and the humanities parts of the story. We chose to spend eleven class sessions on the sciences, up to the common ancestor to chimps and humans. We spent one session on human evolution from that ancestor, followed by fourteen sessions of human history since the appearance of *Homo sapiens* 200,000 years ago, concluding with two sessions on the future. Individual instructors modified this slightly one way or the other.

Behmand and I each taught one section of the survey course. Eight other instructors taught one or two sections: three historians, one biologist, one musician, one art historian, one from sex and gender studies, and one from English. Behmand organized and directed everything, as director of GE.

In order to keep ahead of the students, the instructors met for lunch every Thursday to share materials and discuss issues. Many felt they could not have managed without these meetings; we all felt as if we were beginning teachers again, struggling to grasp the material and shape it our audience. Behmand provided additional lessons in how to teach writing skills. For most instructors, this proved to be their first experience of shared teaching of the same course, with many moments of confession and comic relief. In one memorable remark, a history professor announced after three weeks that he was already a billion and a half years behind.

Teaching big history is not for the faint-hearted; we had much to confront. Some students felt betrayed by having to deal with atoms and other disagreeable science topics; they thought it would be a history course. Many thought the course would be about humans and could not see until the end of the course that it was. A few were disturbed by the conflict they perceived between science and religion, but this did not emerge as a dominant issue. Both teachers and students had trouble discerning which details were important to try to remember and which were simply illustrative of the big ideas.

Using two texts proved to be even more problematic than we had expected. We had hoped that students would enjoy hearing two different voices and making comparisons, but for many this proved beyond their reading skills. Even so, instructors valued having a text that could engage more advanced students, since the range of skill levels was great.

Another major challenge arose from attempting to integrate the teaching of writing skills into already overwhelming subject matter. Instructors had a wide range of background for this; the ones who felt more comfortable tended to be more effective at it. Many students made great improvements in their writing, but at the cost of less time for the content. The writing instruction seemed essential, but next time we may move some of it into the second semester.

By the end of the course most students felt that the thresholds had been a lifesaver, guiding them through the material. When asked to write about what they had learned, they made varied comments like these:

- “I remember learning all his information at a given point in my schooling, but I never thought to connect it to see what I get. It was a great experience to have this the first semester of college.”
- “I was always able to walk out of this class and connect it to something that was going on around me or in the world.”
- “This course has taught me to appreciate what I have.”
- “Now when I look at plants, apes and space, I know where it came from, how it formed, and its importance. It’s good to know knowledge like this, because one day my child is going to ask me something like this, and I am going to know the answer.”
- “. . .there’s lots of possibility for the future, and there could be more thresholds if people get inspired.”
- “I will try to reduce my human footprint on the world.”
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### Next Steps In the Survey Course

By late November 2010 we three authors had completed the first draft of our new textbook, to be published by McGraw-Hill and called *Big History: Between Nothing and Everything*. We asked our publisher if a draft edition could be printed, so that, in addition to experts, we could also receive feedback from students. McGraw-Hill responded by printing a Preliminary Edition, without maps or illustrations. This semester this edition is being used with one class at Grand Valley State University, where Craig Benjamin teaches, and one class at Dominican of students who didn’t take it last semester. Next fall it will be used in about twelve sections at Dominican and again at Grand Valley. Students will write lengthy reviews to help us improve it before the final first edition, which we hope will be out in the summer of 2012.

This year’s instructors of the big history survey course are full of ideas for how to improve it the next time around. We want to adjust the writing assignments, as mentioned. We need to choose the best videos and clips from the multitude of material available. Of course, next time we will have “The Journey of the Universe,” which we plan to make a campus-wide event, assisted by the appearance of Brian Swimme. This year we planned two campus events: a star gazing evening, which was canceled due to rain, and the Charlie Chaplin movie, “Modern Times,” which proved a big hit. Stars were favorite topic for students; they had no idea that stars are born and die; we hope to do more with stars next time.

### Second Semester Courses

Six courses for the second semester of freshman year are in currently in progress. I will simply list their titles; syllabi are available to anyone interested.

- Visual Art Through the Lens of Big History
- Human Cultures and Political Systems Through the Lens of Big History
- Myth and Metaphor Through the Lens of Big History
- Business and Trade Through the Lens of Big History
- Religion/Philosophy Through the Lens of Big History: Humanity’s Attempt to Discover the Mean of Life
- Sex and Gender Through the Lens of Big History

Dominican is planning another big history summer institute for the end of this May. We need more instructors for the freshman courses, plus many instructors are eager to join the intellectual ferment that is sweeping the campus. Last summer we focused on content, this time we will spend more time on how to teach it. In addition, a new required GE course for the sophomore year, called "Shaping the Future," needs more planning. By 2012 Dominican hopes to be able to invite instructors from other places to join us for a big history summer institute.

In conclusion, on the whole we at Dominican are having an exhilarating time with our students and with each other as we pioneer big history. We have confirmed our belief that the whole story can often be transformative for students and, at the very least, provides them with an invaluable framework for their future studies. They have to work hard, as do their instructors, but it definitely feels worth the effort.

#### Postscript: Continuing Evolution of Big History

The idea of big history seems to be spreading rapidly. As a postscript, I want to mention some of the developments taking place beyond Dominican, and even beyond academia.

##### 1. The Formation of the International Big History Association (IBHA)

One leading proponent of big history, Walter Alvarez, is a geologist teaching at UC-Berkeley. Alvarez led the detective hunt to discover what destroyed the dinosaurs sixty-five million years ago, permitting the rapid evolution of mammals. Alvarez's work in the Apennine Mountains of Italy led him and his colleagues to the asteroid's crater hidden underwater just off the Yucatan in Mexico.

Alvarez, noticing that most tellers of the big story tend to give geology scant space in their accounts, invited a small group of us to spend a week last August learning geology in Coldigioco, Italy, near the eastern coast on the Adriatic Sea. Between field trips to examine rocks, we made also made plans for the formation of a new organization. We realized that big historians could not just organize, as we had been doing, as a sub-group of the World History Association; we needed to have an organization that encompasses all the disciplines.

Since our meeting in Italy, much progress has been made toward the formation of the International Big History Association (IBHA). Headquarters have been found at Grand Valley State University. Officers have been elected, with David Christian as president and Fred Spier as Vice-president. By-laws have been drawn up and filed for non-profit status. IBHA's first conference has been set for August 3-5 at Grand Valley State University. A membership drive will be underway by this summer, broad-based to appeal to international and multi-disciplinary members. For more about IBHA and big history, see [www. ibhanet.org](http://www.ibhanet.org), Wikipedia, and Youtube (David Christian at Techonomy).

#### The ChronoZoom Project

Out of Walter Alvarez's big history teaching at UC-Berkeley has come a project called ChronoZoom, created by one of Alvarez's students, Roland Saekow. It is being developed by Microsoft as an interactive master timeline of history from the big bang to the present, with features that enable the user to see multiple data lined up by time

periods and to zoom in on whatever information is desired in greater depth. Continued additions are underway. Check it out at <http://eps.berkeley.edu~saekow/chronozoom>.

### The Big History Project

On March 2 David Christian gave a talk about big history at the TED conference in Long Beach, CA; a link to a video of this talk will soon be found at [www.ibhanet.org](http://www.ibhanet.org). At this conference Christian and Bill Gates announced the Big History Project. This project began when Gates watched Christian's lectures on Big History as produced by the Teaching Company ([www.teach12.com](http://www.teach12.com)). Gates fell in love with big history and invited Christian to submit a proposal for producing a course in big history aimed at ninth grade students. This project is now underway, with the training for the initial six teachers scheduled for this summer, and the first classroom piloting set for this fall in the U.S. and Australia. Fifty more teachers will be added next summer, with release planned for 2013. The course is being developed in two versions---one completely on-line and the other partially on-line for classroom use. When released, this course will be available on-line free for use anywhere in the world, Gate's gift to global understanding.



**Fall 2010**

**FYE 1000 "Big History: From the Big Bang to the Present" (3 units)**

**Angelico 116; Tues.-Thurs., 10:50-12:05**

### **INSTRUCTOR**

Prof. Cynthia S. Brown

Office: 224 Angelico

Email: [cbcynthia@earthlink.net](mailto:cbcynthia@earthlink.net)

Phone: 510-845-3646

Office hours: Tuesdays, 1-2

### **REQUIRED TEXTS AND RESOURCES**

1. Cynthia Stokes Brown. *Big History: From the Big Bang to the Present*. New York: New Press, 2007. ISBN 978-1-59558-414-4.
2. David Christian. *Maps of Time: An Introduction to Big History*. Berkeley, University of California Press, 2005. ISBN 978-0-520-24476-4
3. ChronoZoom—an interactive visualization of the largest timescales, found on the web at [www.chronozoomtimescale.org](http://www.chronozoomtimescale.org).

4. Big History Facebook Club: [www.facebook.com/pages/Big-History/99185533648?sid=40f694f1b5d227bf7337df0b885fd88c&ref](http://www.facebook.com/pages/Big-History/99185533648?sid=40f694f1b5d227bf7337df0b885fd88c&ref)
5. Diana Hacker. *A Writer's Reference with Exercises*. 6<sup>th</sup> ed. Boston and New York: Bedford/St. Martin's, 2009. ISBN # 0-312-57057-0 (for use at Dominican bookstore) or ISBN # 978-0-312-66477-0 (for use elsewhere). You will use this book for your entire four years at Dominican.

## **COURSE DESCRIPTION**

### **FYE 1000 Big History: From the Big Bang to the Present (3 units).**

This course surveys 13.7 billion years, from the Big Bang to the present. We will explore the origins and evolution of the universe, the evolution of life on earth, the emergence of human beings, the creation of complex societies and their impact on the environment and the future of our planet. Building on students' prior knowledge, this course provides an elegant synthesis of the sciences and humanities upon which students can build their future learning and understand their place in the universe story.

#### **Student Learning Outcomes:**

The student will demonstrate

1. comprehension of the major developments in the history of the universe from the Big Bang to the present through analysis of a range of historical phenomena. Assessment: Final exam.
2. an understanding of Big History themes addressed in the course through defining, explaining, and/or analyzing them. Assessment: Two logically and coherently organized essays written in university-level Standard English and crafted through a process of drafting, revising, and editing.
3. the ability to locate and evaluate appropriate secondary sources, and extract and synthesize research; additionally, students must demonstrate appropriate summarizing, paraphrasing, and quoting in accordance to the MLA, APA, or CMS documentation styles. Assessment: two library exercises and one writing assignment.

## **ACADEMIC HONESTY**

The Academic Honesty Honor Code as stated in the Catalog is in effect. All forms of academic dishonesty will be reported and plagiarism –the use of another's words or ideas without proper acknowledgment –will result in a failing grade for the course.

## **DIVERSITY**

Dominican University of California declares that its commitment to diversity and the fulfillment of its educational mission is best achieved when every member of the University community upholds in thought, word, and deed:

*"E Pluribus Unum; Ut Unum Sint\* Two profound visions – our American civic tradition and our Catholic religious heritage – inform Dominican University of California's commitment to the principle of pluralism and to the dream of a reconciled community. Faithful to these birthrights,*

*Dominican seeks to nurture attitudes and behaviors that promote global awareness, inclusive sensibilities, and respect for the dignity of each individual regardless of race, religion, ethnicity, gender, sexual orientation, age, socio-economic status, culture, political conviction, or disability – all in the light of the Truth that breathes forth love and in the hope of a common life that transforms the world."*

\*"Out of many, one; that all may be one"

In this course diversity is evident in the variety of teaching methods used, in the texts of various genres by authors and artists, and in our study of the roles of diverse events, beings, developments, and societies in shaping a common narrative for humanity. Students are required to demonstrate the ability to provide thorough and respectful treatments of all ideas or beliefs.

## **TUTORING**

For students who require help beyond the scope of the class, the Teaching and Learning Center (TLC) in Bertrand 110 offers one-on-one or small-group tutoring in writing, math, and a number of other subjects. Contact TLC at 415-257-0153 for more information.

## **STUDENTS WITH DISABILITIES**

Students with documented disabilities are entitled by law to appropriate and reasonable accommodations. Students with special needs should consult Kathryn Mulholland of Disability Services at 415-257-0187 as soon as possible.

## **CLASSROOM REQUIREMENTS AND POLICIES**

**Attendance, Participation and In-Class Work:** Attendance and in-class work are part of the final grade and can not be made up. Every student is allowed one absence during the semester. Beyond that, each absence will automatically lower the final grade. Active participation in discussions is required of all students.

**Student Conduct:** This course aims to engage all students in analysis, and discussion; that in turn requires the student to be respectful of the classroom environment and avoid disruptive behavior. Please follow the following rules:

- ~ Do not be late to class. Three (3) late arrivals will count as an absence, resulting in a lowering of the final grade.
- ~ Minimize private conversations, but do contribute to class discussions. Laptops for note-taking only.
- ~ Turn off cell phones; actually turn them off rather than putting them on vibrate.
- ~ Do not text message in class; this includes receiving and reading text messages.
- ~ Remove all headsets, Bluetooth or other prior to the beginning of class.
- ~ Do not eat in the classroom.

**Library Exercises:** Two library exercises and their due dates are indicated on the syllabus. These exercises take place in reserved classrooms with members of the

library faculty. You must attend the sessions to complete the exercises. Plan to arrive a few minutes early for these sessions.

**Writing Assignment :** This writing assignment builds on the library exercises. The assignment, whose due date is indicated on the syllabus, should be typed, double-spaced, with one-inch margins.

**Reader's Responses (RR):** There are 5 Reader's Responses due in this class; only four of them will count toward your grade. These Reader's Responses are your answer to one of the day's study questions as indicated on the syllabus and must be typed, single or double-spaced, and handed in at the beginning of the class. They will not be accepted outside class. **Reader's Responses can not be made up.**

**Quizzes:** There will be four quizzes in this class. The three with the highest grades will count toward your final grade. **Quizzes can not be made up.**

**Papers:** You will write two papers in this class from the list of topics provided by your instructor. The due dates for the thesis statements and early drafts are indicated on the syllabus. Your draft should be an essay rather than an outline or half-paper and as close to the final version of the paper as possible. **Your instructor will not accept a paper without an earlier draft.** The paper should include a Works Cited page even if you only use the textbooks assigned for the course.

The paper is due in hardcopy at the beginning of class on the day specified on the syllabus. A late paper will lose 3% points every 24 hours it is overdue. As a general rule, your paper should be double-spaced, and printed in black ink in a 12-point standard font with 1"- margins on all sides.

**Class leadership:** During the last seven classes teams of three students will lead class discussions, using the study questions or questions of your own to provoke lively discussion.

**Final Exam:** This course will have a cumulative final exam at, intended to measure understanding of the assigned reading and the in-class lectures and discussions.

## **GRADE**

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| <b>Attendance and In-Class Exercises</b> | <b>10%</b> |
| <b>Library Exercise 1</b>                | <b>2%</b>  |
| <b>Library Exercise 2</b>                | <b>3%</b>  |
| <b>Writing Assignment</b>                | <b>5%</b>  |
| <b>4 Reader's Responses</b>              | <b>10%</b> |
| <b>Quizzes (best 3 out of 4)</b>         | <b>10%</b> |
| <b>Paper 1 (1000 word each)</b>          | <b>15%</b> |
| <b>Paper 1 (1000 word each)</b>          | <b>20%</b> |
| <b>Discussion leadership</b>             | <b>5%</b>  |
| <b>Final Exam</b>                        | <b>20%</b> |

## **YOUR E-MAIL BUDDIES**

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Name: \_\_\_\_\_

Email: \_\_\_\_\_

Please take the time to meet the two students next to you. Note down their names and email addresses. If you miss class, contact your email buddies first. Then if you still have questions, contact your instructor.

### **SCHEDULE FOR READINGS AND ASSIGNMENTS**

The schedule for readings and assignments is subject to change. Additional readings can be assigned and required. Once announced in class or via email, you are responsible for those changes. Always bring the indicated textbook to class with you.

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| <p><b>1.</b><br/><b>Tuesday, 8/24</b></p>  | <ul style="list-style-type: none"> <li>• Introduction to Big History, each other and creation stories.</li> </ul> <p>Discuss syllabus. Choose e-mail buddies.</p>   |
| <p><b>2.</b><br/><b>Thursday, 8/26</b></p> | <ul style="list-style-type: none"> <li>• Origins of the Universe: Threshold 1</li> <li>• <b>Have read Brown, 3-7; Christian, 8-11; 17-38</b></li> </ul> <p><b>DUE: Reader's Response 1 (RR1)</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How and when does modern science suggest that the universe began?</li> <li>~ What evidence do cosmologists use to support their account?</li> <li>~ Is it possible to reconcile the scientific account with religious accounts of the origins of the universe?</li> </ul> |
| <p><b>3.</b><br/><b>Tuesday, 8/31</b></p>  | <ul style="list-style-type: none"> <li>• Origins of Galaxies and Stars, Death of Stars: Thresholds 2 and 3</li> </ul> <p><b>DUE: Reader's Response 2 (RR2)</b></p> <ul style="list-style-type: none"> <li>• <b>Have read Brown, 7-11; Christian 39-56.</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ What is a star, exactly? What is a galaxy?</li> <li>~ How are stars born?</li> <li>~ How do stars create new elements when they die?</li> </ul>  |
| <p><b>4.</b><br/><b>Thursday. 9/2</b></p>  | <p><b>Library Exercise 1: Mapping the Physical and Virtual Library</b></p> <p>Meet in room_____</p>   |
| <p><b>5.</b><br/><b>Tuesday. 9/7</b></p>   | <ul style="list-style-type: none"> <li>• Formation of Solar System : Threshold 4</li> <li>• <b>Have read Brown, 11-15; Christian, 57-61.</b></li> </ul> <p><b>DUE: Library Exercise 1: Mapping the Physical and Virtual Library</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How and when did our sun and solar system evolve?</li> <li>~ How do scientists know the age of the earth and solar system?</li> <li>~ Describe what causes the seasons on earth.</li> </ul>  |
| <p><b>6.</b><br/><b>Thursday. 9/9</b></p>  | <ul style="list-style-type: none"> <li>• Early Earth</li> <li>• <b>Have read Brown, 12-13; Christian, 61-75.</b></li> </ul> <p><b>QUIZ 1 (Covers topics 1-5)</b></p>  |

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|   | <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ What forces shaped the history of Earth's lands, seas and atmosphere?</li> <li>~ What are the main pieces of evidence to support the theory of 'plate tectonics'?</li> <li>~ Are we just lucky that the earth evolved in the location and manner that it did?</li> </ul>   |
| <p><b>7.</b><br/><b>Tuesday, 9/14</b></p>   | <p><b>Library Exercise 2: Journal Citations and Searches</b><br/>Meet in Room _____</p>   |
| <p><b>8.</b><br/><b>Thursday, 9/16</b></p>  | <ul style="list-style-type: none"> <li>• Summarizing, Paraphrasing, and Quoting. Avoiding Plagiarism.</li> </ul> <p><b>DUE: Library Exercise 2: Journal Citations and Searches</b><br/><b>DUE: Writing Assignment</b></p>   |
| <p><b>9.</b><br/><b>Tuesday, 9/21</b></p>   | <ul style="list-style-type: none"> <li>• Evolution and the Origin of Life: Threshold 5</li> <li>• <b>Have read Brown 16-20; Christian, 79-105.</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How and when did life first appear on Earth, according to modern science?</li> <li>~ How would you explain the theory of (and evidence for) Darwinian evolution by natural selection to a non-scientist?</li> <li>~ Why do some people have trouble accepting evolution?</li> <li>~ How likely is it that there is life somewhere else in the universe?</li> </ul> |
| <p><b>10.</b><br/><b>Thursday, 9/23</b></p> | <ul style="list-style-type: none"> <li>• Evolution of Life I</li> </ul> <p><b>DUE: Reader's Response 3 (RR3)</b><br/><b>• Have read Brown, 20-23; Christian, 107-117.</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ Describe the evolution of single-celled organisms from 2-.5 billion years ago.</li> </ul>  |
| <p><b>11.</b><br/><b>Tuesday, 9/28</b></p>  | <ul style="list-style-type: none"> <li>• Evolution of Life II. Writing a Thesis 1</li> <li>• <b>Have read Brown, 24-37; Christian, 117-136; Hacker, 10-11; 14-17-69-70.</b></li> </ul> <p><b>QUIZ 2 (covers topics 6-10)</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ What is the 'Cambrian explosion'? What are the key pieces of evidence that modern scientists use to support this account?</li> <li>~ Focusing on one or two examples, examine the importance of extinction events in world history up to 5 million years ago.</li> </ul>                        |
| <p><b>12.</b><br/><b>Thursday, 9/30</b></p> | <ul style="list-style-type: none"> <li>• Primates and Hominines . Thesis workshop 1</li> </ul> <p><b>• Have read Brown, 32-48; Christian, 139-169.</b><br/><b>DUE: Thesis Statement for Paper 1. Bring 2 printed out copies to class.</b></p>   |

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|  | <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ In what ways are humans similar to, but different from, chimpanzees?</li> <li>~ What are the main stages in the evolution of hominines?</li> <li>~ Was Lucy 'human'? What about Homo habilis? Homo erectus? Why or why not?</li> </ul>  |
| <p><b>13.</b><br/><b>Tuesday, 10/5</b></p>   | <ul style="list-style-type: none"> <li>• Appearance of Homo Sapiens: Threshold 6.</li> <li>• <b>Have read Brown, 48-56; Christian, 171-184</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How and when did modern humans evolve? When did human history begin?</li> <li>~ Are humans unique in some way?</li> <li>~ What is the significance of language acquisition to human evolution?</li> <li>~ What are some of the pros and cons of having a large brain?</li> </ul>  |
| <p><b>14.</b><br/><b>Thursday, 10/7</b></p>  | <p>Hunting/Gathering. Draft Peer-Review Workshop 1<br/><b>Have read Brown, 57-71; Christian, 185-203. DUE: Draft for Paper 1. Bring 3 printed out copies to class.</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How did humans live for the first 95% of our history?</li> <li>~ How can we best explain the extinction of megafauna in America and Australia?</li> <li>~ What do some historians mean when they describe the Paleolithic Era as the 'original affluent society'?</li> </ul> <p>- What impact did Paleolithic humans have on global environments?</p>      |
| <p><b>15.</b><br/><b>Tuesday, 10/12</b></p>  | <p>Class will meet in new location.</p> <ul style="list-style-type: none"> <li>• Transition to Agriculture: Threshold 7</li> <li>• <b>Have read Brown, 74-93; Christian, 207-244.</b></li> </ul> <ul style="list-style-type: none"> <li>~ How and when did agriculture first begin?</li> <li>~ Why did some human communities make the transition from hunting-gathering to farming? Was this a conscious decision?</li> <li>~ What is symbiosis? What is domestication?</li> <li>~ How would human history have been different if there had been no agricultural revolution?</li> </ul>               |
| <p><b>16.</b><br/><b>Thursday, 10/14</b></p> | <ul style="list-style-type: none"> <li>• Class will meet 11-12 a.m.</li> <li>• Early Agricultural Societies. Paper self-assessment</li> <li>• <b>Have read Christian, 245-267.</b></li> </ul> <p><b>DUE: Paper 1. Bring 2 printed out copies to class.</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How did agriculture spread during the agrarian era?</li> <li>~ Describe some differences in village life around the globe during this era. How do we explain these differences?</li> <li>~ What sort of tasks did early human communities need leaders for?</li> </ul> |

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|  | <ul style="list-style-type: none"> <li>~ Describe the difference between consensual and coercive power</li> <li>~ Does the emergence of agriculture usher in gender inequality? What evidence can be used to support your account?</li> </ul>  |
| <p><b>17.</b><br/><b>Tuesday, 10/19</b></p>  | <ul style="list-style-type: none"> <li>• First Cities and States</li> <li>• <b>Have read Brown, 94-109; Christian, 267-282.</b></li> <li><b>QUIZ 3 (covers topics 11-16)</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How do we explain the quite rapid appearance of cities in Mesopotamia late in the 4th millennium BCE?</li> <li>~ Is the appearance of cities and states necessarily a sign of progress?</li> <li>~ How did population growth affect the nature of political systems?</li> <li>~ What position would you have liked to occupy in an early tributary system, and why?</li> </ul>  |
| <p><b>18.</b><br/><b>Thursday, 10/21</b></p> | <ul style="list-style-type: none"> <li>• Era of Agrarian Civilizations: Long-range trends &amp; Silk Roads</li> <li>• <b>Have read Christian, 293-332.</b></li> <li><b>DUE: Reader's Response 4 (RR4)</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ What is the difference between states and agrarian civilizations?</li> <li>~ How and why did states become more powerful over time?</li> <li>~ Did agrarian civilizations encourage or discourage population growth? Or technological innovation?</li> <li>~ Why are the Silk Roads important to human history? What key forms of evidence can be used to support your account?</li> </ul> |
| <p><b>19.</b><br/><b>Tuesday, 10/26</b></p>  | <ul style="list-style-type: none"> <li>• Era of Agrarian Civilizations—Afroeurasia</li> <li>• <b>Have read Brown, 110-146.</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ Compare the key agrarian civilizations that developed in Afroeurasia 800 BC-200 CE.</li> <li>~ Describe the expanding networks of trade in Afroeurasia 200 BCE-1000 CE.</li> <li>~ Describe the role of nomads and others on the edges of the Afroeurasian network.</li> <li>~ Describe the environmental effects of human activity, 200 BCE-1000 CE.</li> </ul>  |
| <p><b>20.</b><br/><b>Thursday, 10/28</b></p> | <ul style="list-style-type: none"> <li>• Era of Agrarian Civilizations—Americas &amp; Australia. Writing a Thesis 2</li> <li>• <b>Have read Brown, 147-167.</b></li> <li><b>DUE: Reader's Response 5 (RR5)</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ How and why did agrarian civilizations appear in the Americas?</li> <li>~ Why did cultures and communities in North America never evolve into full agrarian civilizations?</li> <li>~ Compare the era of agrarian civilizations in Afroeurasia and the</li> </ul>   |

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|  | <p>Americas. What differences and similarities do you see?</p> <p>~ Why is the matter of the timing of civilizations in Afroeurasia and the Americas so crucial to subsequent human history?</p>  |
| <p><b>21.</b><br/><b>Tuesday, 11/2</b></p>   | <ul style="list-style-type: none"> <li>• The Eve of Modernity 1000-1500: Mongols.</li> <li>• <b>Have read Brown, 168-187; Christian, 335-363.</b></li> </ul> <p><b>DUE: Thesis Statement for Paper 2. Bring 2 printed out copies to class.</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ In what ways can the Mongol Empire be seen as presaging the modern world?</li> <li>~ Using the example of the Black Death, explain the importance of disease in shaping human history.</li> <li>~ Describe Europe from 1000-1500; what evidences of modernity were evident?</li> </ul>  |
| <p><b>22.</b><br/><b>Thursday, 11/4</b></p>  | <p><b>QUIZ 4 (covers topics 17-21)</b></p> <ul style="list-style-type: none"> <li>• Modern Revolution: Connecting the Globe; Thesis Workshop 2</li> <li>• <b>Have read Brown, 188-209.</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ What was the global significance of the voyages of Columbus?</li> <li>~ Why were the small commercial states of pre-modern Europe so dynamic, compared to the great agrarian civilizations?</li> <li>~ Why did the 'modern revolution' take a European form rather than Chinese or Islamic?</li> </ul>   |
| <p><b>23.</b><br/><b>Tuesday, 11/9</b></p>   | <ul style="list-style-type: none"> <li>• Industrial Revolution in Britain: Threshold 8</li> <li>• <b>Have read Brown, 210-217; Christian, 406-426.</b></li> </ul> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ Why did the industrial revolution occur in Britain first?</li> <li>~ Describe the social and the agricultural revolution in Britain prior to the industrial revolution.</li> <li>~ On the global scale, what was the significance of the industrial revolution?</li> </ul>   |
| <p><b>24.</b><br/><b>Thursday, 11/11</b></p> | <ul style="list-style-type: none"> <li>• Spread of Industrial Revolution. Draft Peer-Review Workshop 2</li> <li>• <b>Have read Brown, 217-220; Christian, 426-439.</b></li> </ul> <p><b>DUE: Draft for Paper 2. Bring 3 printed out copies to class.</b></p> <p>Study Questions:</p> <ul style="list-style-type: none"> <li>~ Why did the Industrial Revolution spread?</li> <li>~ How does the modern state differ from traditional states? What are the distinctive features of the modern state?</li> <li>~ What was the significance to human history of the Napoleonic Era in France?</li> <li>~ What were living conditions like for people living in the newly industrial cities of Manchester, London, Berlin and New York?</li> <li>~ What were some environmental impacts of industrialization in both</li> </ul> |

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|  | <p>the industrialized and non-industrialized regions of the world?</p> <p>~ To what extent can we argue that today's environmental problems are a direct result of the Industrial Revolution?</p>  |
| <p><b>25.</b><br/><b>Tuesday, 11/16</b></p>  | <p>• Twentieth Century I<br/> <b>• Have read Brown 220-229; Christian, 440-459.</b></p> <p>Study Questions:</p> <p>~ Was the 20th century fundamentally different from all previous periods of human history? If so, why?</p> <p>~ How does a 'big history' of the 20th century differ from other histories of the 20th century?</p> <p>~ Why has population growth accelerated in the 20th Century?</p> <p>~ How did gender roles change in the 20th Century?</p> <p>~ Is capitalism ultimately a constructive or destructive force?</p>  |
| <p><b>26.</b><br/><b>Thursday, 11/18</b></p> | <p>• Twentieth Century II: Environmental<br/> <b>• Have read Brown, 230-241; Christian, 459-464.</b></p> <p><b>DUE: Paper 2. Bring two copies. One copy is intended for course assessment and should be anonymous without your name, the name of the instructor, or the section number.</b></p> <p>Study Questions:</p> <p>~ How did human impacts on the environment change in intensity in the 20th century?</p> <p>~ What are the main environmental problems facing humans now as a result of environmental impacts in the 20th Century?</p> <p>~ Is capitalism ecologically blind; or the best hope for the environment?</p> <p>~ How optimistic are you about our ability to solve these problems?</p> |
| <p><b>27.</b><br/><b>Tuesday, 11/23</b></p>  | <p>• Next Hundred Years: Threshold 9?<br/> <b>• Have read Brown, 241-246; Christian, 467-481.</b></p> <p>Study Questions:</p> <p>~ Should historians be interested in the future?</p> <p>~ What do you think the future holds in store over the next century?</p> <p>~ What can we do to influence the future on the scale of the next century?</p>  |
| <p><b>28.</b><br/><b>Tuesday, 11/30</b></p>  | <p>• Distant Future<br/> <b>• Have read Brown, 246-248; Christian, 481-491.</b></p> <p>Study Questions:</p> <p>~ What, if anything, can we say about the future on the scale of the next thousand years?</p> <p>~ What is the ultimate future of the human race, planet Earth, our solar system, and the Universe?</p> <p>~ Does the study of history on this scale help us predict the future?</p>  |

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| <b>29.</b><br><b>Thursday 12/2</b> | <ul style="list-style-type: none"><li>• Last day of class. Review.</li><li>• <b>Have read Brown, xi-xvi; Christian, xv-xviii.</b></li></ul> |
| <b>December</b>                    | <b>Finals' Week. Final Exam: Dec. _____ at _____</b>  |