

COURSE SYLLABUS FOR EARTH 105 - SPRING 2008

Welcome to EARTH 105!

First time here? Click on "[Start Here!](#)" to begin the site orientation **(Required!)**

Want to meet your instructor? Click on "[Instructor Information](#)" to access my bio and a short introduction.

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Course Overview

EARTH 105: ENVIRONMENTS OF AFRICA - GEOLOGY AND CLIMATE HISTORY (3 credits). Significant natural features of Africa as related to human endeavor; case studies include the Nile, climate change, and natural resources.

Prerequisites: None

This course investigates the interrelationships between geology, hydrology, land use and human development in several areas of Africa. We will focus primarily on regions north of the equator, although there is a brief segment on South African mining. Specific topics include the Nile River (sources of the Nile, agricultural practices, effects of damming the Nile, and hydropolitics), the Sahara and Sahel (salt mines, climate change, drought, and water resources), and natural resources and their role in politics (gold, diamonds, oil, and gas). The theme of climate change cuts across the entire semester. The quantitative and analytical components of the course involve working through a combination of map exercises and data manipulations (flood stage, groundwater age, rainfall, and temperature records). Readings for the course come from the popular scientific literature, current refereed journals, and transcribed oral histories of African people. In addition to those external reading assignments, you will be expected to read "lecture" materials and to engage in weekly learning activities (some of which are submitted for a grade, while others are for self-practice). You will also engage in weekly online, asynchronous class discussions.

What will be expected of you?

On average, most students spend eight to twelve hours per week working on course assignments. Your workload may be more or less depending on your prior experience with computing and the Web in general, and with geology in particular.

My colleagues and I have worked hard to make this the most effective and convenient educational experience possible. The Internet is still a novel learning environment, but in one sense it is no different than a traditional college class: how much and how well you learn is ultimately up to you. You will succeed if you are diligent about keeping up with the class schedule, and if you take advantage of opportunities to communicate with me, as well as with your fellow students.

Specific learning objectives associated with each lesson and project are outlined below (under "Course Objectives"). The class schedule is published in the Calendar (see [Calendar](#) tab above).

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Course Goals

The goals of the course are to:

1. introduce the scientific study of Africa;
2. develop quantitative and scientific reasoning skills;
3. explore the relationship between human society and the natural world. The topics that we explore (e.g., global climate change, allocation of limited water resources) are important political issues that affect peoples in developed and developing countries throughout the world. It is crucial that the next generation of citizens be informed as to how scientific data are obtained, presented, and interpreted by scientists as well as politicians. Through this course students will gain an appreciation of the scope of geological time and change, and will be able to incorporate this new long-term perspective into identification and resolution of modern questions.

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Required Course Materials

In order to take this course, you need to have an active Penn State Access Account user ID and password (used to access the on-line course resources). If you have any questions about obtaining or activating your Penn State Access Account, please contact your campus Registrar.

Required Materials

- There are not any required textbooks for this course. However, you are strongly encouraged to purchase a map of the African continent to use as reference for all readings and assignments. Maps of Africa can be obtained from many popular online booksellers.

Supplemental (optional) Readings

Readings can be found linked in each Lesson and in the General Resources folder.

Using the Library

Many of Penn State's library resources can be utilized from a distance. Through the Library web site, you can...

- access electronic databases, and even full text articles, from the LIAS Fast Track,
- borrow materials and have them delivered to your doorstep...or even your desktop,
- access materials that your instructor has put on Electronic Reserve,
- talk to reference librarians in real time using the "Virtual Reference Service",
- ...and much more.

NOTE: You must be registered with the University Libraries in order to take full advantage of the Libraries' resources and services. Registration and services are free.

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Technical Requirements

For this course we recommend the minimum technical requirements outlined on the *ANGEL Help and Information Guide*. If you need technical assistance at any point during the course, please contact the [ANGEL Help Desk](#)

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Assignments and Grading

Grading will be based primarily on exercises submitted through ANGEL. There will one lengthy research activity that forms the crux of the climate change section of the course. You will be asked to electronically record reflective statements that catalogue your reactions to various readings and exercises, as well as areas of concern or confusion. There will be no final examination.

The overall percentages of the final course credit allotted to each element are as follows:

COURSE ELEMENT	PERCENT OF GRADE
ANGEL Discussion Forums	15%
Topic-Specific Assignments	25%
Thought-Provoking Assignments	35%
Climate change project	25%

Discussion Forums will each be graded on a scale of 0-3. A score of zero is if you did not log in and participate. A score of 1 is for people that clearly just log in and throw something on the board to try to get credit. A score of 2 is for people that answer the question specifically and do not provide further information or opinions. A score of 3 will be awarded to students that clearly have thought about what is being asked, that include information from the lessons and readings, and voice their point-of-view on the subject. All scores will be tallied and divided by the total highest possible points and recorded as a percentage at the end of the semester. Note that some message boards are required and will be graded, while others are optional for you to post general questions or comments. Pay attention to the details in the weekly lessons and under the [Calendar](#) tab to note which ones are required.

Topic-Specific Assignments are those that focus on a narrow subject that involve some research and some synthesis of information. **Thought-Provoking Assignments** may be wider in scope and require more in-depth research and formulation of hypotheses and supporting information.

So that you know where you stand in the course throughout the semester, all grades will be posted in ANGEL with each assignment. You will be able to track your progress and calculate your average as the course goes along.

Letter grades will be based on the following percentages:

A 93-100%

A-	90-92.9%
B+	87-89.9%
B	83-86.9%
B-	80-82.9%
C+	77-79.9%
C	70-76.9%
D	60-69.9%
F	<60%

Percentages refer to the proportion of all possible points earned by the student.

Note: Do not expect me to round up or curve grades during or at the end of the semester. Grades will not be curved, and I do not give extra credit exercises or bonus points. Put your best effort into all of the assignments as you complete them.

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Course Schedule

Below you will find a summary of the learning activities for this course and the associated time frames. This course is 12 weeks in length, with an orientation week preceding the official start of the course.

- **Orientation week begins:** January 14-18, 2008
- **Course begins:** January 22, 2008
- **Course ends:** April 21, 2008
- **Course length:** 12 weeks

Lesson 0 - Orientation Week

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Complete the steps outlined in the [site orientation in Lesson 0](#). (Required!)**

Lesson 1: Africa in Context

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Early Development of Global Population**
- **Thought-Provoking Assignment - Africa's Languages and Environments**

Lesson 2 - Africa Geologic History and Paleontology

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum and Assignment- Virtual Dating Lab**
- **Discussion Forum - Dinosaur Hunting in Africa**
- **Topic-Specific Assignment - The Dating Game - Prehistoric Edition!**

Lesson 3 - African Biodiversity and Conservation

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Women for African Conservation**
- **Discussion Forum - Globalizing African Conservation**
- **Topic-Specific Assignment - The Fate of the Mountain Gorillas**

Lesson 4 - The Nile River - An Overview

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - The Meeting of the Niles in Khartoum**
- **Thought-Provoking Assignment - Rains and Rivers**

Lesson 5 - The Nile River - Finding the Source

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Analyzing an Ancient Map**
- **Topic-Specific Assignment - Flows and Floods**

Lesson 6 - The Nile River - Where Does the Water Go?

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - The Future of the Jonglei Canal**
- **Topic-Specific Assignment - The 1959 Water Agreement**

Lesson 7 - Climate of Africa, Part I

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Climate of Africa, Part I**
- **Topic-Specific Assignment - The Age of Saharan Groundwater**

Lesson 8 - Climate of Africa, Part II

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Climate of Africa, Part II**
- **Climate Change Project, Part A**

Lesson 9 - Climate of Africa, Part III

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Climate of Africa, Part III**
- **Climate Change Project, Part B**

Lesson 10 - East African Rifting

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Nyiragongo**
- **Thought-Provoking Assignment - Paleoclimate Activity: Palynology from African Rift Lakes**

Lesson 11 - Natural Resources

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Cocoa and Change**
- **Thought-Provoking Assignment - What's the Conflict with Diamonds?**

Lesson 12 - Miscellaneous Cool Topics

TIME FRAME: 1 week

ASSIGNMENTS and ACTIVITIES

- **Discussion Forum - Man-Eating Lions of Tsavo - is it their fault?**
- **Topic-Specific Assignment - Managing the Serengeti National Park**
- **Topic-Specific Assignment - Africa's Strength to Overcome**

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Course Policies

(Note:

pay close attention to everything outlined in Lesson 0. This is where academic integrity, APA formatting for references, and Turnitin are discussed.)

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Disclaimer: Please note that the specifics of this Course Syllabus can be changed at any time, and you will be responsible for abiding by any such changes. Changes will be posted to the course message board.



This course was developed by the e-Education Institute.

It is being delivered through Penn State's eLearning Cooperative.
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Every reasonable effort has been made to ensure the accessibility of this course. Contact your instructor or technical support personnel for assistance if you discover any element of the

course that you are unable to access or use.

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