

SEP 14 2012

LSC Use Only Proposal No: UWUCC Use Only Proposal No: 12-38
 LSC Action-Date: AP-2/14/13 UWUCC Action-Date: AP-2/19/13 Senate Action Date: App-3/26/13

Curriculum Proposal Cover Sheet - University-Wide Undergraduate Curriculum Committee

Contact Person(s) Francis Allard	Email Address allard@iup.edu
Proposing Department/Unit Anthropology	Phone 7-2413

Check all appropriate lines and complete all information. Use a separate cover sheet for each course proposal and/or program proposal.

1. Course Proposals (check all that apply)

New Course Course Prefix Change Course Deletion
 Course Revision Course Number and/or Title Change Catalog Description Change

Current course prefix, number and full title: _____

Proposed course prefix, number and full title, if changing: **ANTH 250: Human Origins**

2. Liberal Studies Course Designations, as appropriate

This course is also proposed as a Liberal Studies Course (please mark the appropriate categories below)

Learning Skills Knowledge Area Global and Multicultural Awareness Writing Across the Curriculum (W Course)
 Liberal Studies Elective (please mark the designation(s) that applies – must meet at least one)
 Global Citizenship Information Literacy Oral Communication
 Quantitative Reasoning Scientific Literacy

3. Other Designations, as appropriate

Honors College Course Other: (e.g. Women's Studies, Pan African)

4. Program Proposals

New Degree Program Catalog Description Change New Track Other
 New Minor Program Program Title Change Liberal Studies Requirement Changes in Program

Current program name: _____

Proposed program name, if changing: _____

5. Approvals	Signature	Date
Department Curriculum Committee Chair(s)	<i>Stacy W. Newson</i>	9/7/12
Department Chairperson(s)	<i>Philip D. New</i>	9-7-12
College Curriculum Committee Chair	<i>Randy J. Seel</i>	9-7-12
College Dean	<i>Ann</i>	9/14/12
Director of Liberal Studies (as needed)	<i>Deil H. Probst</i>	2/18/13
Director of Honors College (as needed)		
Provost (as needed)		
Additional signatures (with title) as appropriate:		
UWUCC Co-Chairs	<i>Gail S Seel</i>	2/20/13

Received Received Received Received

FEB 20 2013 Please Number All Pages FEB 15 2013 NOV 26 2013 SEP 18 2012

ANTH 250 Human Origins

I. Catalog Description

ANTH 250 Human Origins	3 class hours
	0 lab hours
Prerequisites: None	3 credits
	(3c-0l-3cr)

Offers a detailed and critical review of what has been learned to date about the origin and evolution of human morphology and behavior. Introduces students to the many human-like species ('hominins') that preceded the emergence of our own species (*Homo sapiens*), and examines the range of methods used by scientists to study human evolution. It also addresses a number of relevant and controversial issues, such as what it means to be 'human', the extent and nature of present-day human variation, and whether *Homo sapiens* is still evolving.

II. Course Objectives, Learning Outcomes and Rationales (Scientific Literacy)

The student will be able to:

Objective 1: Identify hominin species and recognize the biometric and dating techniques used by scientists to differentiate one hominin species from another and construct the phylogeny ('family tree') of hominins.

Learning Outcome 1: Informed Learners

Rationale: Through assignments and in-class demonstrations using copies of hominin fossils, students will recognize and evaluate the range of similarities and differences among hominin species, and assess how such data can be used in the challenging task of reconstructing hominin phylogenies.

Objective 2: Compare and contrast *Homo sapiens* morphology, cognition and behavior to that of other animal species.

Learning Outcome 2: Empowered Learners

Rationale: Students will recognize the wide range of methods used by scientists to identify similarities and differences between *Homo sapiens* and other animal species in relation to morphology, cognition and behavior. Assignments will require students to select and organize relevant biometric, behavioral, and neuroscientific comparative data.

Objective 3: Support and justify the use of evolutionary theory in attempts to chart the evolution of hominins, a process that led to the emergence of *Homo sapiens*.

Learning Outcomes 2 and 3: Empowered and Responsible Learners

Rationale: Students will critically discuss the relevance of a Darwinian evolutionary model for understanding human origins and the hominin fossil record. They will judge non-evolutionary approaches and models in relation to basic scientific principles, and demonstrate the continued popularity of such approaches within their broader social and cultural context.

Objective 4: Evaluate the importance that learned behavior ('culture') has played - and continues to play - over the course of human evolution.

Learning Outcomes 2 and 3: Empowered and Responsible Learners

Rationale: Through numerous examples presented in class, students will recognize the extent to which a behavioral trait is learned and / or innate. Such knowledge will also help students identify the role that an extended capacity for 'culture' in hominins has played over the course of evolution, as well as over the past 100,000 years as modern humans have diversified and adapted to varied physical and social environments.

Objective 5: Recognize, contrast and explain the different models proposed by anthropologists and other scientists to account for the emergence and evolution of modern human morphological, cognitive and behavioral traits.

Learning Outcome 1: Informed Learners

Rationale: Students will become aware of the many contributions made by different disciplines to our understanding of some of 'milestones' of human evolution (e.g. the emergence and development of hunting, cooking, intelligence, pair-bonding). The evaluation of such models, a topic of continuing controversy among palaeoanthropologists, will require students to discuss and support these different models based on the available data.

III. Course Outline

A. Methods in the Study of Human Origins and Evolution (6 hours)

- Understanding the geological context
- Climate and environmental reconstruction
- Dating methods
- Excavation
- The study of bones and plants
- Genetic studies
- Lithic analysis
- Other techniques for studying fossils and past environments
- Reconstructing phylogenies: limitations and interpretations
- Primatology

B. Humans as Primates (6 hours)

- What is a primate?
- Primate phylogeny. Hominids and hominins
- The comparative approach: What do primate anatomy, genetics, cognition and behavior tell us about human origins and evolution?
- Humans, chimpanzees and bonobos: how similar are we really?

Exam #1 (1 hour)

Optional weekend trip to visit the human evolution galleries at the Smithsonian's Natural History Museum in Washington, DC.

C. From Toumai to Homo: The First Four Million Years (6 hours)

- The emergence of hominins as a speciation event.
- The nature of the early fossil record. Identifying ancestral and derived traits.
- Overview of early hominin diversity, species co-existence, and evolution.
- What early hominins tell us about the evolution of human locomotion, cognition, subsistence, mating strategies and social organization.
- A closer look at Toumai, Ardi, Lucy and Dikika.

D. Early Homo to Homo sapiens (8 hours)

- *Homo habilis*: Intelligence and tool use
- *Homo erectus*: Adaptability, anatomy, subsistence, and dispersal out of Africa. The Nariokotome Boy.
- Archaic *Homo sapiens* in Africa, Europe and Asia.
- Neandertals: Anatomy, adaptation, behavior, and dispersal.
- Modern *Homo sapiens*: Origins, anatomy, adaptation, and behavior; art and symbolic behavior; the out-of-Africa model of dispersal.
- The co-existence of *Homo sapiens* and Neandertals: Chronology; interaction; what caused the demise of Neandertals?

Exam #2 (1 hour)

E. *Homo sapiens*: Dispersal and Variation (8 hours)

- Charting the world-wide dispersal of *Homo sapiens*: Morphological and genetic studies.
- The characterization and explanation of modern day human variation. A critical look at the concept of 'race'.

F. Debates in the Study of Human Origins and Evolution (6 hours)

- Debating models of human evolution and phylogenies.
- The case of *Homo floresiensis* in Indonesia.
- Are humans still evolving?
- Evolutionary psychology, primatology, and the nature of humanity.

Exam #3 during Finals Week (2 hours)

IV. Evaluation Methods

The final grade will be determined as follows:

60% Three exams worth 20% each. Exams #1 and 2 will be given during the semester, and Exam #3 during Finals week. Each exam will consist of one third multiple choice questions, one third identification questions, and one third short essay questions.

20% Two essays worth 10% each. Essay #1 will require students to review and critically assess the scientific literature pertaining to one of many important discoveries in the field of human origins and evolution. Students will be able to choose from a range of topics, including discoveries in the field of primatology, discoveries of new hominin species, and the development of new research methodologies. Note: A sample essay assignment on the discovery of the hominin remains known as the 'Hobbit' is included in this course proposal. Essay #2 will require students to review and critically assess the scientific literature pertaining to the issue of continuing human evolution.

20% Four announced short quizzes throughout the semester. Each quiz will consist of True-False, short answer, and identification questions.

V. Grading Scale

Grading scale: A ($\geq 90\%$), B (80-89%), C (70-79%), D (60-69%), F (<60%)

VI. Attendance Policy

The attendance policy will follow the Undergraduate Course Attendance Policy as outlined in the undergraduate catalog.

VII. Required textbooks, supplemental books and readings

Klein, R. (2009). *The Human Career: Human Biological and Cultural Origins*. Chicago: The University of Chicago Press.

Meredith, M. (2011). *Born in Africa: the Quest for the Origins of Human Life*. New York: PublicAffairs. A lively account of paleoanthropological fieldwork and of the intensive rivalries that have marked the discipline over the past century, this book is an ideal supplemental book.

A set of required readings consisting of short news pieces on recent discoveries and advances in the field of human evolution will be made available at the beginning of the course.

VIII. Special resource requirements

None. However, interested students will need to pay approximately \$80.00 to cover the cost of an optional trip to Washington DC to visit the Hall of Human Origins at the Smithsonian's Natural History Museum.

IX. Bibliography

Bickerton, D. (2009). *Adam's Tongue: How Humans Made Language, How Language Made Humans*. New York: Basic Books.

Fagan, B. (2011). *Cro-Magnon: How the Ice Age Gave Birth to the First Modern Humans*. New York: Bloomsbury Press.

Finlayson, C. (2009). *The Humans Who Went Extinct: Why Neanderthals Died Out and We Survived*. Oxford; New York: Oxford University Press.

Gibbons, A. (2006). *The First Human: The Race to Discover Our Earliest Ancestors*. New York: Anchor Books.

Johanson, D. and B. Edgar (2006). *From Lucy to language*. New York: Simon and Schuster.

Mithen, S. (2003). *After the Ice: A Global Human History 20,000-5000 BC*. London: Weidenfeld & Nicolson.

Palmer, D. (2007). *The Origins of Man*. London; Cape Town; Sydney; Auckland: New Holland Publishers.

Renfrew, C. and I. Morley (eds) (2009). *Becoming Human. Innovation in Prehistoric Material and Spiritual Culture*. Cambridge; New York; Melbourne; Madrid; Cape Town; Singapore; Sao Paulo; Delhi: Cambridge University Press.

Sawyer, G.J. and Viktor Deak (2007). *The last Human: A Guide to Twenty-two Species of Extinct Humans*. New Haven; London: Yale University Press.

Stringer, C. and P. Andrews (2005). *The Complete World of Human Evolution*. London; New York: Thames & Hudson.

Tattersall, I. (2009). *The Fossil Trail* (second edition). Oxford: Oxford University Press.

Wade, N. (2006). *Before the Dawn: Recovering the Lost History of our Ancestors*. New York: Penguin Press.

Wrangham, R. (2009). *Catching Fire: How Cooking Made Us Human*. New York: Basic Books.

Zimmer, C. (2005). *Smithsonian Intimate Guide to Human Origins*. Washington, D.C.: Smithsonian Books; New York, NY: Collins.

Course Analysis Questionnaire

Section A: Details of the Course

- A1 This course is designed as a Liberal Studies Elective. No existing course at IUP focuses on the topic of human origin and evolution. Although two of the Anthropology department's existing liberal studies social science electives (ANTH 110 Contemporary Anthropology and ANTH 213 World Archaeology) do address the subject matter, they do so only as one of many topics that such introductory courses must cover.
- A2 This course does not require any change to the content of existing courses or to program requirements.
- A3 In the Fall 2008 semester, the department of Anthropology offered a special topics course titled 'Human Origins' (ANTH 481). A total of 19 students (most of these Anthropology majors) registered for the course. 'Defining Humanness' (LBST 499) is a similar (but not identical) course that was offered twice online (summers 2010 and 2011) and taught by a faculty member of the Anthropology department. The enrollments for these two LBST 499 courses were in the low 20's.
- A4 This course is not a dual level course.
- A5 This course cannot be taken for variable credit.
- A6 Courses similar to the one being proposed are offered at many institutions in the United States. The following are three examples:
- Indiana University at Bloomington: *Human Origins and Prehistory* (A105)
 - Washington University in St.Louis: *Introduction to Human Evolution* (Anthropology 150A)
 - Cornell University: *Human Evolution: Genes, Behavior, and the Fossil Record* (Anth 1300)
- A7 The content and skills of the proposed course are not recommended or required by a professional society.

Section B: Interdisciplinary Implications

- B1 This course will only be taught by instructors of the Anthropology Department.
- B2 No department offers a course on human evolution. The department of Biology does have a few offerings that have limited overlap with the proposed course, for example in their coverage of a specific topic or method that is also discussed in the proposed course. These include BIOL 263 Genetics and BIOL 271 Evolution. The department of Geoscience offers a course (GEOS 353 Paleontology) that also covers some of the methods discussed in this proposed course, although it is believed that its temporal coverage does not extend to the

period of hominin evolution. Letters of support from both the Biology and Geoscience departments are included in this course proposal.

B3 This course will not be cross-listed with other departments.

Section C: Implementation

- C1 Faculty resources are adequate. Furthermore, flexibility is assured by the fact that the Department of Anthropology has five faculty members who are qualified to teach this course. The department plans to keep its Liberal Studies Social Science offerings at the same enrollment level, but expects some reduction in the number of Liberal Studies Electives that it offers during any semester when this proposed course is taught. However, the demand for Liberal Studies Electives is expected to lessen as a result of the Liberal Studies Revision. Adding this course will actually help the department meet anticipated changes in the Liberal Studies Program.
- C2 The department's current collection of casts of hominin and primate skulls and other skeletal elements will serve as the course's primary teaching materials. The course will not require any other resources (space, equipment, supplies, consumable goods, library materials, or travel funds). When needed, the library allocation and ESF funds will be used to upgrade course resources.
- C3 None of course's resources are funded by a grant.
- C4 This course will be taught during the Fall or Spring semester every academic year.
- C5 Two sections in any one semester.
- C6 A total of 50 students would ensure instruction to a sufficiently large number of students, while also allowing the instructor to make efficient use of the casts and other teaching material (which will need to be passed around and sometimes compared and discussed as students stand around the desk).
- C7 No professional society recommends enrollment limits or parameters for a course of this nature.
- C8 This course is not a distance education course.

Sample Assignment for the course 'Human Origins'

Essay Assignment on the 'Hobbit'

Length: 1500 - 2000 words

Double-spaced

This assignment is worth 10% of your final grade

Relying on the set of 12 short news articles available online for viewing, as well as more current information available on the web (you'll need to consult at least one web source), review the history of research on *Homo floresiensis* (the 'Hobbit') since its discovery on the island of Flores (Indonesia) in 2004. Your essay should include a review of not only the scientific work carried out so far, but also of the personalities involved and the many debates / 'battles' this discovery has generated. One such debate pits those who believe the 'hobbit' to be a *Homo sapiens* individual against others who remain convinced that he belongs to an earlier species of hominins that left Africa over a million years ago. Make sure you understand (and discuss in your essay) the implications such a debate has for our understanding of hominin phylogeny and what it means to be 'human'.

Grading Criteria

The essay will be given an A grade if it satisfies the following criteria:

- It falls within the required 1500 - 2000 word length.
- It is well structured and organized in a logical manner that allows for easy comprehension of the ideas being presented. The presentation of the information follows a clear organizing principle (e.g. chronologically).
- There are no (or very few) spelling and grammatical mistakes. When present, these mistakes do not impede the reader's understanding of the essay.
- It presents and discusses information taken from all of the required sources (the 12 short news articles and at least one recent web source).
- It offers a clear review of the debates surrounding the interpretation of the *Homo floresiensis* remains since their discovery in 2004.
- There is clear evidence that the student understands the broader impact of the *Homo floresiensis* discovery, including its implications in regard to our understanding of hominin phylogeny and what it means to be 'human'.

The essay will be given a B grade if it satisfies the following criteria:

- It falls within the required 1500 - 2000 word length.
- It is generally well structured and organized, although there are a few gaps in the presentation of ideas.
- There are a number of spelling and grammatical mistakes, although these do not impede the reader's understanding of the essay.
- One or two of the required sources (the 12 short news articles and at least one recent web source) are missing from the essay.
- It offers a generally clear review of the debates surrounding the interpretation of the *Homo floresiensis* remains since their discovery in 2004, although the student has misunderstood (or failed to discuss) the nature of some of the arguments.
- There is evidence that the student understands the broader impact of the *Homo floresiensis* discovery, although some of the less obvious implications are not discussed.

The essay will be given a C grade if it satisfies the following criteria:

- It falls outside the required 1500 - 2000 word length.
- It is not well structured and organized, with many gaps in the way the ideas are presented.
- Spelling and grammatical mistakes impede the reader's understanding of some portions of the essay.
- Three or four of the required sources (the 12 short news articles and at least one recent web source) are missing from the essay.
- It offers an overall poor review of the debates surrounding the interpretation of the *Homo floresiensis* remains since their discovery in 2004. The student has misunderstood (or failed to discuss) many of the arguments.
- There is little evidence that the student understands the broader impact of the *Homo floresiensis* discovery, with only a few of the implications of the discovery correctly discussed in the essay.

The essay will be given a D grade if it satisfies the following criteria:

- It falls outside the required 1500 - 2000 word length.
- It is very poorly structured and organized, with much of the essay presenting ideas in a haphazard manner.
- Spelling and grammatical mistakes impede the reader's understanding of many portions of the essay.
- Between five and seven of the required sources (the 12 short news articles and at least one recent web source) are missing from the essay.
- The essay offers a very poor review of the debates surrounding the interpretation of the *Homo floresiensis* remains since their discovery in 2004, with evidence that the student has misunderstood the majority of the arguments.
- There is little evidence that the student understands the broader impact of the *Homo floresiensis* discovery, with only the most obvious and simplest of the implications of the discovery correctly discussed in the essay.

The essay will receive an F grade when:

- It falls outside the required 1500 - 2000 word length.
- It is very poorly structured, shows no organizing principle whatsoever, and the information is presented in a haphazard manner.
- The large number of spelling and grammatical mistakes makes it very difficult to follow or understand the narrative.
- At least eight of the required sources (the 12 short news articles and at least one recent web source) are missing from the essay.
- It displays almost no understanding of the debates surrounding the interpretation of the *Homo floresiensis* remains since their discovery in 2004.
- There is no evidence that the student understands the broader impact of the *Homo floresiensis* discovery, including its implications in regard to our understanding of hominin phylogeny and what it means to be 'human'.

Liberal Studies Course Approval Questions

1. Although the course's two yearly sections will often be taught by a single instructor, a total of five faculty members in Anthropology are qualified to teach the course and are likely to do so on occasion. All instructors involved in teaching the course will meet every year to exchange syllabi, discuss possible new content (in keeping with advances in the discipline), and review course objectives, guidelines and grading criteria. Such meetings and exchanges will ensure the maintenance of basic equivalency.
2. The course dedicates a significant amount of time to reviewing the issue of the emergence and maintenance of present-day genetic and phenotypic variation in *Homo sapiens*, variation that is itself rooted in our common origin in Africa some 200,000 years ago. The course illustrates how natural selection helps us understand instances of geographic variation in selected phenotypic traits, while also highlighting the reasons why it is in fact not possible to devise a classification system that accounts for such variation. A discussion of how and why modern humans vary phenotypically not only serves to demystify such variation, it also contributes to an understanding of ancestry, ethnicity, population movements, and the nature of contact among diverse populations. The course also reviews how various models of human evolution have tackled the issue of differences between males and females. Some models propose that such differences have played a central role in driving human evolution, while others suggest that they help explain present-day behavioral differences, which are themselves evident as cross-cultural patterning.
3. As indicated in the syllabus, this course has, beyond the required textbook, one required non-fiction supplemental book (Meredith, M. 2011. *Born in Africa: the Quest for the Origins of Human Life*. New York: PublicAffairs), as well as a set of readings consisting of short news pieces on recent discoveries and advances in the field of human evolution.
4. This course is expressly designed to introduce IUP's general student population to the topic of human evolution and origins. The course 'Biological Anthropology' (ANTH 222), which is required of all Anthropology majors, does share some content with the proposed LS course, although ANTH 222 covers a significantly broader range of topics, including molecular genetics; evolutionary theory; primate taxonomy, cognition, and behavior; hominin evolution; the evolution of the life cycle; and evolutionary psychology.