

Proposal Date: 5 September 2012

**Ogden College of Science and Engineering  
Department of Geography and Geology  
Proposal to Create a Temporary Course  
(Information Item)**

Contact Person: Jennifer Cole, [jennifer.cole1@wku.edu](mailto:jennifer.cole1@wku.edu), 745-4555

**1. Identification of proposed course**

- 1.1 Course prefix (subject area) and number: BIOL 304
- 1.2 Course title: How to Build a Habitable Planet
- 1.3 Abbreviated course title: HON: BUILD A HABITABLE PLANET
- 1.4 Credit hours: 3
- 1.5 Schedule type: Seminar
- 1.6 Prerequisites: None
- 1.7 Course description:

The only evidence for past or present life in the Universe is found on Earth. We will begin with the Big Bang and finish with 7+ billion people on the planet. Students will learn how to create a terrestrial planet like Earth, and the elemental building blocks required for life. The many forms of life on Earth are possible because of certain physical properties of our planet and a tightly regulated system that connects physical, chemical, and biological components. Importantly, students will come to appreciate the role that humans occupy within this complex Earth system, rather than separate from it.

**2. Rationale**

- 2.1 Reason for offering this course on a temporary basis:  
This course is being offered in partnership with the Honors College on a trial basis, with the goal of developing a permanent course for the new Colonnade General Education program.
- 2.2 Relationship of the proposed course to courses offered in other academic units:  
This course presents material of a highly interdisciplinary range. Though aspects from many traditional disciplines (e.g., astronomy, geology, biology, geography) are presented in some forms, there is no current course that covers all of the material proposed here from this perspective. This course will be cross-listed with GEOG 304 and GEOL 304.

**3. Description of proposed course**

- 3.1 Course content outline
  - A. Earliest history of the Universe
    - i. Big bang
    - ii. Formation of chemical elements
    - iii. Formation of molecules, interstellar clouds
  - B. Formation of our Solar System
    - i. Our Sun
    - ii. Formation of rocks & the planets
    - iii. Timescale of the universe & solar system

- C. The physical Earth
  - i. Planetary differentiation – Earth as layers
  - ii. Plate tectonics – Earth in motion
  - iii. Connections between the layers
  - iv. Making it comfortable – atmosphere
- D. The organic Earth
  - i. Populating the surface
  - ii. Competition, evolution, and extinction
  - iii. Human impacts on environment & climate

3.2 Tentative text(s)  
 Langmuir & Broecker (2012) *How to Build a Habitable Planet*. Princeton. ISBN 978-0691140063.

**4. Term of Implementation: Spring 2013**

**5. Dates of review/approvals:**

Biology Department	_____ 9/5/2012 _____
Ogden College Curriculum Committee	_____ 9/6/2012 _____
Ogden Dean	_____ 9/6/12 Cheryl Stevens _____
UCC Chair	_____
Provost:	_____

**Attachment: Course Inventory Form**