

March 6, 2012

ACU-UGEC

Council:

In the reconsideration of courses that might count as fulfilling the natural science requirement for ACU undergraduates, the following sentence appears: "Petitions for course approval from departments outside these disciplines should be accompanied with a letter of support from the appropriate department." The Department of Agriculture and Environment has proposed five different courses (AENV 130, ENVR 112, ENVR 233, ANSC 111, and ANSC 235) to serve in this role. Since those courses are closest to the field of Biology, I have been asked to write in support of their inclusion. This is the letter of support.

I have read the student learning outcomes for each of the courses and believe they address the council's request that the courses address "particular critical thinking methods." While I do not believe each of the courses has the same breadth as other typical general education courses (e.g. BIOL 101: Biology---Human Perspective or CHEM 101---Consumer Chemistry), in comparison to some other general education courses used they seem reasonable.

Jim Nichols

Chair, Biology

ANSC 235: Companion Animal Management
SLOs

Students will:

1. Explore and gain an understanding of the concepts of animal nutrition, reproduction, genetics and their relationship to the growth, development and care of companion animals.
2. Acquire the skills to analyze and interpret data necessary to draw conclusions about appropriate nutrient requirements and health care practices for companion animals.
3. Assess the evidence required to discriminate normal behavior from abnormal behavior of animals as it informs the standards for appropriate care.
4. Evaluate the contribution of scientific understandings in addressing social, ethical and religious questions about the value and treatment of companion animals as well as the control of companion animal populations.

ANSC 111: General Animal Science

SLOs

Students will:

- 1) Explore and gain understanding of the concepts of animal nutrition, reproduction and genetics
- 2) Acquire skills necessary to analyze and interpret data from animal studies as presented in class or laboratory and assess how information can support or modify theories
- 3) Utilize the scientific method to assess hypotheses tested in laboratory experiments.
- 4) Explore how scientific thinking and viewpoints can inform and shape understanding of current issues related to animal/human interactions in such areas as food quality and safety, animal welfare/rights and human health issues.

ENVR 233: Soil Science

SLOs

Students will:

- 1) Gain understanding of the concepts of soil physics, chemistry, nutrition, and ecology.
- 2) Acquire skills to analyze graphical data presented in lecture or generated as part of the lab experience.
- 3) Develop hypotheses, test them by conducting experiments in lab, interpret and draw conclusions from the data that may shed light on scientific explanations for phenomena.
- 4) Explore current agro-ecological practices in comparison to historical practices and non-traditional practices.

AENV 130: Environmental Science and Technology
SLOs

Students will:

- 1) Gain experience in analyzing and interpreting data in environmental science as presented in tables and figures during lecture or in the textbook.
- 2) Write a position paper that will require them to read and interpret scientific literature and evaluate conclusions drawn from the data therein to support their position.
- 3) Evaluate scientific explanations of environmental phenomena in relationship to linkages with ethical, economic, historical or technological understandings.
- 4) Integrate environmental science concepts related to energy, biodiversity, population, pollution, and other similar topics into their understandings of impacts on people and the Earth.