

General Education Council
Minutes for 2/28/00

Members Present:

T. Sanchez-Student Rep
R. Northcutt-Science
G. Rydl-Applied Arts
J. Ross-Business
V. Sriraman-Science
M. Brennan-Liberal Arts
B. Brown-Liberal Arts
L. Thomas-Health Professions
K. Moffeit-Business
F. Blevens-Fine Arts
V. Luizzi-Chair Rep
S. Beebe-Chair Rep
B. Melzer-Health Professions

Members Absent:

T. Mijares-Applied Arts
C. McCall-Education
T. Mandeville-Education
M. Lord-Education
E. Nielsen-Fine Arts
R. Whalin-Fine Arts
C. Schroeder-Student Rep

Guests:

L. Estaville-Geography
D. Glassman-Anthropology
D. Olson-Astronomy
R. Doescher-Astronomy
G. Passty-Science

The meeting convened at 3:35 p.m.

S. Beebe asked for the criteria for understanding the natural science component. R. Brown supplied the Council with the 5 objectives for the core curriculum component, natural science.

Motion:

R. Brown asked for a motion to approve the minutes from the February 14th meeting. J. Ross so moves. S. Beebe seconds the motion. The February 14th minutes were approved as prepared.

R. Brown distributed the official copy of PPS 1.12 for Council approval. The Council unanimously approved PPS 1.12.

Geography:

Lawrence Estaville, Chair of Geography, visited the Council to discuss the Geography recommendation to include environmental and physical geography to the natural science component for general education core curriculum. He distributed a handout detailing the proposed course requirements. After meeting with the faculty and Acting Dean Ellis, he was asked to include some upper division courses identified as alternates in the catalog. L. Estaville's justifications included:

1. All the proposed courses meet the educational objectives. He included the SWT Geography course descriptions and example syllabi. He also provided a matrix with Texas University Geography courses.

V. Sriraman asked if UT and Texas A & M geography classes required a lab? L. Estaville's response was his belief that 4 credit hour courses included labs. V. Luizzi asked if the geography courses are funded at a different rate than science? Yes, geography courses are funded at a different rate because they are part of the Liberal Arts CIP codes, not science.

2. We strongly feel it is not fair and equitable that SWT's students cannot receive natural science credit for these physical geography courses here, yet, they can receive natural science credit for our physical geography courses at other universities when transferring.
3. Apparently driven by the influential community college interests in Texas, the 75th and 76th Texas Legislature through statute have charged the Texas Higher Education Coordinating Board with providing a system in which lower division general education courses can be transferred transparently from one Texas institution of higher education to another.

[R. Brown informed the Council and guests that the Higher Education Board does not require that all general education core curriculums be the same at all institutions. The institution designates the courses in their core curriculum. The student would carry those courses to whatever institution they attend. The memo from the Coordinating Board is about Field of Study that affects the student at the major/departement level.]

4. The Geography Department currently has the both the pedagogic and physical infrastructure to offer the foregoing geography courses as part of the General Education Core Curriculum Science Requirement beginning in fall 2000.

V. Luizzi asked L. Estaville to briefly address the criteria for justification as a natural science objective for the proposed courses.

L. Estaville indicated that the current courses under the natural science component did not meet all the objectives. He indicated evidence of the objectives was found in the syllabi. L. Estaville provided biographies for the two proposed courses. He indicated they were both appropriate to the natural sciences.

Method and technology is applied within the courses. All geography pre-major and majors are required to take the Spacial Statistics course that deals with the quantitative method. R. Northcutt indicated that the course Spacial Statistics is reasonable for Geography majors, but not for the general education core curriculum. L. Estaville was pointing out that the objective was quantitative methods and yes, Geography does have this objective. S. Beebe asked if all six courses teach the scientific method? L. Estaville said the two lower division courses would be very elementary and the upper division more advanced.

L. Estaville believes we all identify and recognize the differences among competing scientific theories as teachers. All Geography courses engage in, discuss and analyze a variety of scientific theories.

L. Estaville indicated that objective four, demonstrating knowledge of the major issues and problems facing modern science, is meet by Geography because it is a highly applied program.

L. Estaville stated, "These 5 objectives ladies and gentlemen are not just directed to one course, these 5 objectives are for the institution to endure when an individual student gets through the natural sciences that they've had these 5 objectives and been exposed to these 5 objectives."

Objective 5, to demonstrate knowledge of the interdependence of science and technology, is a strength of the Geography Department. Geography is in a large part interdisciplinary. Geography at this institution has one of the most cutting edge technological perspectives mainly because of the Geography Ph. D. program.

B. Melzer asked if 2310 and 2410 had prerequisites? L. Estaville indicated they were both entry point courses.

[R. Brown advised the Council that the 3000 level courses could only be used as a replacement for a particular student and not sent forward as part of the General Education Core Curriculum. The Council could approve the 3000 level courses as acceptable on an individual base because

the premise of the General Education Core Curriculum is that it is a freshman/sophomore level curriculum.]

F. Blevin asked what the Science requirement perspectives are now. R. Brown indicated the science perspective is made of two elements: the old General Studies requirements from which the current science curriculum was adopted and the Coordinating Board exemplary objectives. The addition of these two Geography courses would be adding to the list. The Council can only send forward the two sophomore level courses. If the Council approves those two courses, they could say there are situations where the student might need the upper level course work and these might be appropriate for those needs. There can be no specific core curriculum that is not freshman/sophomore level. Any student under the 1999 catalog and later are under the General Education Core Curriculum and not General Studies.

S. Beebe asked how many sections of each of the two courses are presently taught? L. Estaville stated that now two sections of each are being taught with 120 to 60 students. They have 6 faculty that could teach these courses and the available classroom space.

M. Brennan asked what the advantage to taking this course as opposed to the other natural science courses? L. Estaville said it depends on what you do and the advising process.

G. Rdyll asked if 2310 was a lecture course and if 2410 included a lab and this was confirmed. B. Brown teaches in lab hands on experience from scientific to etc.

V. Sriraman asked what the hands on process entailed? How is it systematic? It was indicated that the scientific method is taught in the field.

Anthropology:

D. Glassman, Chair of Anthropology, visited the Council to discuss the Anthropology recommendation to include Physical Anthropology to the natural science core curriculum. He distributed a handout detailing the proposed course requirements. Physical Anthropology deals with the comparisons and differences in people no matter where they exist in time. Anthropology has been separated in the United States into Cultural Anthropology and Physical Anthropology. Cultural Anthropology deals with the behavior of humans. Physical Anthropology is defined as the study of human biology within the framework of evolution. It concentrates on the mechanisms by which modern humans came to be and the understanding of human physical variation as it relates to its adaptive significance. It sounds like biology and is synonymous with what is taught in General Biology. The difference is the focus point. Here we are talking about how humans relate to their biology and the biology of other living things. In Europe it is taught in the Biology Department. The Biologists thought the Anthropologists would work on the issue that human condition is the interaction of biology and behavior and working on one another throughout the evolutionary perspective in our evolutionary history. Physical Anthropology is not included as a science at all institutions because it is a less common discipline. Those institutions in Texas that have Anthropology Departments and Physical Anthropologists on staff do have Physical Anthropology as a natural science core curriculum.

D. Glassman supplied his syllabus for review. It has a required text and a working laboratory component where the students are trained in the equipment used for physical anthropology. Students solve hypothesis tests and collect data on one another in the lab. The course is divided into 3 sections:

1. The first deals with the theory of evolution. What is evolution how the theory was derived, the mechanism of evolutionary change, the biological basis of life, the inheritance of physical traits and population genetics are discussed.
2. The second section is devoted to examining humans' place in nature, with emphasis on the anatomic structures and behavioral activities that occur among members of the taxonomic order, Primates.

3. The third section examines the evolutionary history of humans and other non-human primates as interpreted from the fossil record.

The lab that accompanies Anthropology 2414 provides the students with training in collecting and interpreting physical data using the most modern techniques and equipment appropriate to physical anthropology.

All the objectives for natural science are indicated in the syllabus. As far as accommodating students the class now has about 150 students and 6 labs. If the course is accepted by the Council, he envisions reassigning the class to be taught in one of the lecture halls to accommodate about 300 students. They would then be divided into laboratory breakout sessions with labs of 30 students each. They would be handled by the 1/2 time FTE position and a couple of Instructional Assistants hired out of the course fee funds.

Questions:

G. RdyI asked how they look at chromosomes. D. Glassman said they look at chromosomes that have been photographed from a slide to be cut and the caryotype assembled. Do you have a lot of genetics and physiology background? He said absolutely, as an undergraduate and graduate.

V. Luizzi asked for clarification of the laws of nature in relation to physical anthropology. The principles deal with the evolutionary theory, natural order of things, changing environment, inheritance and survival.

T. Sanchez asked what the companion to physical anthropology would be to complete the 7 or 8 hour required natural science. The obvious companion would be zoology or biology (genetics) or botany.

Astronomy:

R. Doescher and D. Olson visited the Council to discuss the recommendation to include Astronomy courses 1340, 1350 and lab 1140 in the natural science core curriculum component. Astronomy uses Astrophysics. They also use the laws of physics to understand the composition and basic physical principles. Many professional astronomers no longer use telescopes.

R. Doescher informed the Council of some of the mechanisms used in the astronomy courses. They use the core board list to identify the planets, using rules of physics, and data interpreting of data collected. Much of the science is studied more through the observatory, robotic and the space station. They do not study the extraterrestrial. They use the Doppler Effect to study biology and the hypothesis about extraterrestrial life forms. The scientific side of it is, is there life out there? The contribution to our country is that in the 1800's through astronomy they discovered that the heavens were different. The big telescopes help us see that we are a part of the universe and we see this through the Doppler Effect.

The 21st Century has been the Age of Technology. We can see the image of planets from neighboring stars. This is a focus for students and physics for how we know it. Is Astronomy a science? Yes it is. If the recommendation were accepted we would accommodate the increased demand by hiring more TA's for the labs, but have taught as many as 3 to 4 classes in the past. Astronomy labs would entail 4 things. The lab would stand-alone with 18-25 students per lab. In the present night lab course there are 12 students.

V. Luizzi asked the objectives to not being a science? Astronomy is used for students interested in a BA and physics is the smallest of the sciences.

G. Passty from the College of Science is visiting the Council on behalf of Dean Israel. He wanted to Council to be aware of what should be a natural science and what is a natural science. He explained that an understanding of a natural science included five elements:

1. Description of scientific approach to the world.
2. Depth on subject

3. Using and understanding the laws of science
4. Lab experience (elements) repeatability, controlled experiment, objective observation of nature and phenomenon of nature
5. Quantitative and measurement

He explained that Dean Israel does not want science to be just a walk on the beach. He wants a formulated specific task, organization to forming a goal and analyzing the world around you.

R. Brown asked the Council if they would like to stay or come back for a special meeting to discuss the recommendations?

Motion:

S. Beebe moved to adjourn and have a special meeting on Monday, March 6th at 3:30. F. Blevens seconded.

Motion passed 11 for, 1 opposed.

Meeting adjourned at 5:17 p.m.