

General Education Council
Minutes
2.12.01

Committee members present:

T. Hindson-Liberal Arts
M. Hennessy-Liberal Arts
T. Mandeville-Education
R. Northcutt-Science
V. Sriraman-Science
S. Beebe-Chair Rep
B. Brown-Liberal Arts
W. Stone-Applied Arts
L. Thomas-Health Professions
F. Blevens-Fine Arts and Communication
K. Moffeit-Business

Committee members absent:

J. Crawford-Chair
S. Springer-Applied Arts
J. Ross-Business
M. Lord-Education
C. McCall-Education
T. Mottet-Fine Arts and Communication
A. Lopez-Student Rep
M. Benavides-Student Rep

Guests:

Richard Earl
David Butler
Lawrence Estaville
George Malanson

Meeting convened at 3:32 p.m.

Motion:

R. Brown asked for a motion to approve the minutes from December 4th. R. Northcutt so moves. M. Hennessy seconds the motion. The December 4th minutes were approved as prepared.

R. Brown asked the Council if they had any questions about the Geography 2410 proposal. One issue raised by the subcommittee was how exactly is science tested in this course?

The Geography representatives told the Council it is tested the same as in other classes, written and oral.

W. Stone asked the Geography Representatives what other disciplines apply knowledge from this area?

The Geography Representatives told the Council that Geography studies changes in the Earth's surface through natural and social processes. These surface processes depend upon other sciences: Geology (below the surface), Meteorology (above the surface), and Astronomy (outside the atmosphere). Physical Geography takes from all these other disciplines, but particularly it focuses on the surface.

Others disciplines that use physical Geography are Geologists, Ecologists, Meteorologist, Climateologist and Biologists.

T. Hindson asked the Geography Representatives what Texas Universities have Physical Geography in the College of Science or as a Natural Science?

The Geography Representatives told the Council that Texas A&M, UT, TECH and Sam Houston have Physical Geography in the College of Science or as a Natural Science course. It is part of the core curriculum all across the nation.

S. Beebe asked the Geography Representatives what applications and what specific unique scientific theories are used in Physical Geography and how are they assessed?

The Geography Representatives told the Council that some principles are fundamental and the application of Physics and others say the same. Principles unique to Physical Geography are the combination, complex structures from principles and application interaction levels and what is on the exams. The course requires students to look at principles and see how they work out and occur and see how the hypothesis occurs and why that happens. You can't reason out complex system with just basic laws of physics, but you can with interactions.

S. Beebe asked if there are any Laws of Science unique to Physical Geography? There are no laws unique to Physical Geography. There are theories unique to Physical Geography like the Rate Law and the Geography Equilibrium Theory.

V. Sriraman asked the Geography Representative if the general mechanics of the Equilibrium Theory are different? They indicated they were the same.

The Equilibrium Theory is demonstrated with blocks. The faculty member will slide the block around, shake the block and show other examples with the block to demonstrate the theory.

M. Hennessy asked the Geography Representatives what the students' scientific method knowledge would be after taking this class?

The Geography Representatives told the Council that in the lecture portion of the course the student learns some of how people studied things and through the lab exercises they learn process stating and the evaluating process.

W. Stone told the Council that Physical Geography is found in lots of areas and not really in an independent college. For example, it is found in the College of Science, Social Sciences, Marine Science, Geoscience, Geophysics, and Atmospheric Sciences.

V. Sriraman told the Council that the required numbers of science hours at other universities are higher than they are at SWT.

R. Northcutt told the Council that Physical Geography 2410 is a sophomore level course and has a prerequisite of MATH 1315, which was recently added. A possible problem is that they are not building on any other science and they could miss what we consider to be fundamental sciences. He thinks it will be hard to use MATH 1315 in this course. He does think the lab component was "beefed up".

The Physical Geography course does apply principles of Chemistry and Physics and Meteorology and uses lots of math, but not higher math.

Motion:

The subcommittee recommends rejecting GEO 2410: Physical Geography for inclusion as an additional SWT Natural Science Component of the SWT General Education Core Curriculum.

Support statement: Following a thorough review of the materials submitted in support of this request the subcommittee could not support this course addition to the SWT Natural Science Component for the following reasons:

1. the proposed course does not meet the General Education Council's approved definition as a Natural Science Component courses; instead of providing fundamental information that provides "the knowledge base for a number of applied disciplines. . ." the information presented in this course appears to be **applied** and, thus, does not meet the definition of **providing** the knowledge base on which other disciplines can make application
2. although the field experiences have been incorporated to add the process of data collection to the laboratory portion of the course, there continues to be predominant emphasis on **application of existing** data in laboratory activities versus generating data that can be applied by other disciplines; thus, there is **application** of theories and hypotheses versus developing of theories and hypotheses in the laboratory activities
3. the laws of nature listed in response to item #1c provided support for **application** of theories rather than building an understanding of the theories themselves

Of concern was one additional issue: although MATH 1315 is a pre-requisite it does not appear that the content of that course is used sufficiently throughout this course to require it as a pre-requisite for understanding the material presented in the text or applied through laboratory activities

B. Brown moved to amend the motion so as to accept GEO 2410 as part of The Natural Science Component.

Motion died for lack of a second.

Discussion:

T. Hindson told the Council there was no Mathematics in the Astronomy course (Physics 1340, 1350, 1140).

S. Beebe told the Council that the concern was not math, but the issue was scientific theory.

B. Northcutt told the Council the textbook was not as strong for applying mathematics and problem solving, but the lab manual was better. The lab exercises used data analysis and problem solving with data. He reported that you could see the concepts in applications.

W. Stone asked the question about Geography 2410, is not does it use the scientific method, the question is, does it represent a foundation science?

Motion passed 5 for, 1 opposed.

R. Northcutt told the Council that he wanted more supportive data and over a period of time they could build a case to consider this course as a natural science if the foundational ideas move to be more foundational.

S. Beebe told the Council the issue for him was the course being a foundational science. Some colleges have levels of foundational sciences.

T. Mandeville abstained from voting because of his concern over the course being a foundational science. His thought was if a teacher in a public school was to slip over to teach science or a social studies class and has Physical Geography as their college education science which would they or an administrator feel more comfortable having them teaching? I think they would teach social studies.

M. Hennessy has some of the same issues and questions about the Physical Geography being a foundational science.

T. Hindson asked the Council if they thought it would benefit the Geography Department if they moved over to the College of Science?

R. Brown thanked the Council for their careful deliberation and the faculty for being present and answering the Council's questions.

The General Education Components will be discussed at the next meeting. Electronic copies will be sent to Sarah, and she will distribute them via e-mail or at the meeting.

Senior Interview training will be taught by T. Mottet. There will be a pilot of ten student volunteers. R. Brown wants the Council to participate. Other assessment tools being utilized are syllabus review and portfolio assessment. R. Brown told the Council some statistics from the portfolio assessment. Students

are getting writing, critical thinking and reading in approximately 70% of their classes. They are employing math in 25% of their classes (primarily in math, science and business courses). The students are getting oral communication in 60% and ethics in 40-50% of their classes.

The Council has decided that they want to do the senior interviews. They will take place after Spring Break. The students will be paid \$50. T. Mottet will do a 40-50 minute training session for the interviewers. If the pilot satisfies the Council, we would expand the number to 20 in Spring 2002. The Council will refine the Kansas questions.

Volunteer Interviewers:

F. Blevens
B. Melzer
M. Hennessy
R. Northcutt
T. Hindson

W. Stone suggested that the Council train students to do the interviews and videotape them for review later.

Motion:

R. Brown entertained a motion to adjourn. R. Mandeville so moves.

Meeting adjourned at 5:03 p.m.