Meeting convened at 3:37 p.m.

R. Brown asked the Council to review the agenda.

**Motion:**
R. Brown asked for a motion to approve the minutes from September 25th and October 10th. M. Lord so moves. C. McCall seconds the motion. The September 25th and October 10th minutes were approved as prepared.

S. Beebe suggested to the Council that the minutes be shorter and summarize the motions. R. Brown told the Council they would revisit the issue at a later time.

**Motion:**
The Subcommittee recommended the following:

Since the student representatives to the General Education Council normally have completed their general education courses, responsibly attended the Council meetings, and served the student perspective on the Council, we would recommend their being granted voting status.

While there are reasonable arguments on both sides of this issue, the Subcommittee members agreed that the Council is a recommending body and the student vote would represent only a part of the over-all consensus on any issue. Since the Dean of the College and Vice-President for Academic Affairs would be apprised of votes on critical issues, University interests should prevail.

Motion passed unanimously. R. Brown will make the appropriate corrections to the PPS.
B. Melzer told the Council that the Subcommittee had melded the Coordinating Board Natural Science Component and the SWT Natural Science Component to have all the information in one place. The Subcommittee also created a Subcommittee Review Form.

**Motion:**
The Subcommittee recommends that the Natural Science Component should incorporate all the following assumptions, definitions, objectives, requirements and assessments:

**Texas Coordinating Board Physical and Natural Science Component**

**Assumptions**
1. Every institution of higher education will adopt a core curriculum.
2. A core curriculum should contain courses that establish multiple perspectives on the individual and the world in which he or she lives.

**Definition**
The objective of the study of a natural sciences component of a core curriculum is to enable the student to understand, construct and evaluate relationships in the natural sciences, and to enable the student to understand the bases for building and testing theories.

**Exemplary Educational Objectives**
The way in which colleges and universities achieve these outcomes will thus vary in accordance with the particular circumstances of the institutions. The outcomes for student learning provide both guidelines for instruction and also a profile of the student. The student will be able to:
1. Understand and apply method and appropriate technology to the study of natural sciences
2. Recognize scientific and quantitative methods and the difference between these approaches and other methods of inquiry and to communicate findings, analyses and interpretation both orally and in writing
3. Identify and recognize the differences among competing scientific theories
4. Demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values, and public policies
5. Demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

**Southwest Texas State University Natural Science Component**

**Definition**
The Natural Science Component encompasses that growing body of knowledge by which humans attempt to understand natural phenomena of the universe. These sciences constitute the knowledge base for a number of applied disciplines within the modern university, including industrial arts, physical education, the health sciences and nutrition.

**Requirements**
All students will complete two Natural Science Component courses from the approved list of courses. One of the two courses must be a laboratory course. If the two courses are from different sciences within the Natural Science Component, both courses must include a laboratory.

The courses that satisfy the Natural Science Component present the basic information for the discipline. In addition, these courses also present the scientific approach to the world: how does a scientist view nature, test observations, and create new knowledge? The questions that should be addressed in any Natural Science Component include:

- What is the basic information that one should know for this area of science?
- What are the techniques for using the equipment characteristics of this area of science?
- What laws of nature support this science?
- How does one approach nature from an objective (impersonal) point of view?
- What are the significant features of a given observation?
- What is the significance of a given pattern?
- How does one use the Scientific Method to create new knowledge?
- How do laboratory experiments illustrate natural phenomena in a structured way?
- What constitutes valid science?

**Objectives**
As students find answers to the above questions, they will develop a set of skills that will enable them to approach the world from a scientific perspective. Corresponding to the questions posed about the student should be able to:

- Answer objective questions on basic facts and theory from the given area of science.
- use properly the equipment from the given area of science.
- perceive natural phenomena objectively
- structure their powers of observation in a given situation.
- recognize examples of patterns they have studied.
- use the Scientific Method to create knowledge new to them.
- recognize the occurrence of scientific phenomena in the world around them.
- determine if, in a given situation involving the use of the Scientific Method, the use is valid.

**Assessment**

In evaluating students’ success in meeting the objectives of the Natural Science Component, and in assessing the overall effectiveness of courses that satisfy this component, faculty use some or all of the following measures:

1. Objective quizzes and tests that determine whether students have mastered the cognitive skills in the course.
2. To help determine instructor, course and program effectiveness:
   a. Faculty surveys, including peer review of syllabi and tests;
   b. End-of-course student evaluation.

Courses meeting the Natural Science Component:

### Prior to Fall 2000:

<table>
<thead>
<tr>
<th>Course number</th>
<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1310</td>
<td>Principles of Biology</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1410</td>
<td>Introduction to Plant Biology</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1420</td>
<td>General Zoology</td>
<td>None</td>
</tr>
<tr>
<td>CHEM 1310/1430</td>
<td>Chemistry for Non-science Majors</td>
<td>For 1430: 1310 or 1410</td>
</tr>
<tr>
<td>CHEM 1410/1420</td>
<td>General Chemistry I &amp; II</td>
<td>None</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Physical Geology</td>
<td>None</td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Historical Geology</td>
<td>GEO 1410</td>
</tr>
<tr>
<td>PHYS 1110/1310/1320</td>
<td>Elementary Physics</td>
<td>None</td>
</tr>
<tr>
<td>PHYS 1410/1420</td>
<td>General Physics I &amp; II</td>
<td>1410: MATH 315&amp;1317 1420: PHYS1410</td>
</tr>
<tr>
<td>PHYS 1430/2425/2435</td>
<td>Engineering Sequence</td>
<td>1430: coreq: MATH 2471 2414: prereq1430; 2435 prereq: 2425; coreq: MATH 3373</td>
</tr>
</tbody>
</table>

### Fall 2000 and after:

<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANTH 2414</td>
<td>Physical Anthropology</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1320</td>
<td>Modern Biology I (nonmajors)</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1421</td>
<td>Modern Biology II (nonmajors)</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1430</td>
<td>Functional Biology (majors)</td>
<td>None</td>
</tr>
<tr>
<td>BIO 1431</td>
<td>Organismal Biology (majors)</td>
<td>None</td>
</tr>
<tr>
<td>CHEM 1310</td>
<td>Intro Chem for Non-science Majors</td>
<td>None</td>
</tr>
<tr>
<td>CHEM 1430</td>
<td>Chemistry for Non-science Majors</td>
<td>CHEM 1310 or 1341</td>
</tr>
<tr>
<td>CHEM 1341/1141</td>
<td>General Chemistry I</td>
<td>coreq: 1141</td>
</tr>
<tr>
<td>CHEM 1342/1142</td>
<td>General Chemistry II</td>
<td>1342: prereq:1341 &amp; 1141 1142: Prereq/coreq: 1342</td>
</tr>
<tr>
<td>GEOL 1410</td>
<td>Physical Geology</td>
<td>None</td>
</tr>
<tr>
<td>GEOL 1420</td>
<td>Historical Geology</td>
<td>GEO 1410</td>
</tr>
<tr>
<td>PHYS 1110/1310/1320</td>
<td>Elementary Physics</td>
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<tr>
<td>PHYS 1140/1340/1350</td>
<td>Astronomy</td>
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<td>PHYS 1410</td>
<td>General Physics I</td>
<td>MATH 1315</td>
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<td>PHYS 1420</td>
<td>General Physics II</td>
<td>PHYS1410</td>
</tr>
<tr>
<td>PHYS 1430</td>
<td>Mechanics and Heat</td>
<td>coreq: MATH 2471</td>
</tr>
<tr>
<td>PHYS 2425</td>
<td>Electricity and Magnetism</td>
<td>PHYS1430; coreq: MATH 2472</td>
</tr>
</tbody>
</table>

**Discussion:**
L. Lambert asked how a course is evaluated? R. Brown appoints a committee and they review the proposed course. After the committee evaluates the course they make a recommendation about that course to the Council. The department and Council are given the recommendation at the same time. The department representative may be available to answer questions from the committee or the Council. The Council will have time to review the materials and get any questions answered. The vote for a proposal will take place at the following meeting.

The motion passed unanimously.

The Subcommittee has divided up the other components and will create documents in the same format as the Natural Science Component. They will bring those components to the Council, as they are finished.

B. Melzer told the Council she thinks the initial communication needs to be between the subcommittee and the department.

R. Brown asked the Council to review the Liberal Arts Model Syllabus. He asked the council if they wanted to create a minimum expectation model syllabus?

**Motion:**
R. Brown asked for a motion to approve the following minimum criteria for the General Education Model Syllabus:
- Semester (i.e. Fall, Spring, Summer I, or Summer II).
- Instructor's name, office number, office telephone number, and e-mail address.
- Office hours
- Course prefix/number and title.
- Course description and objectives.
- Required textbook(s) and materials (title, authors, publication date and/or edition, etc.).
- Brief course outline and schedule
- Any special requirements (especially those introducing students to the library as a resource for research and/or those which make use of computer applications).
- Instructor's grading policy.
- Instructor's attendance policy.
- Date/time for final exam (optional, but very helpful)
- Also important to students with special needs is a policy statement that might read: Students with special needs (as documented by the Office of Disability Services) should identify themselves at the beginning of the term.
- Institutional Academic Honesty Policy

S. Beebe so moves. B. Melzer seconds the motion. The motion passed unanimously.

In the Spring the Council will look at the perspectives and the syllabi. R. Brown will appoint a committee to oversee the syllabi every couple of years.

**Motion:**
R. Brown entertained a motion to adjourn. C. McCall so moved. M. Lord seconds the motion. Meeting was adjourned at 4:37 p.m.